

JOINT PUBLIC NOTICE

December 14, 2015

United States Army Corps of Engineers
New Orleans District
Regulatory Branch
Post Office Box 60267
New Orleans, Louisiana 70160-0267

(504) 862-1301
Project Manager
Neil T. Gauthier
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MVN 2011-0954-CM

State of Louisiana
Department of Environmental Quality
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

(225) 219-3225
Project Manager
Elizabeth Hill
WQC Application Number
130319-01

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the US Army Corps of Engineers pursuant to: [X] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, Office of Environmental Services, for a Water Quality Certification (WQC) in accordance with statutory authority contained in LRS 30:2074 A(3) and provisions of Section 401 of the Clean Water Act.

DREDGING AND CREST WIER CONSTRUCTION FOR MARSH CREATION IN TERREBONNE PARISH

NAME OF APPLICANT: United States Fish and Wildlife Service, c/o Louisiana Coastal Protection and Restoration Authority, Attn: Sydney Dobson, P.O. Box 44027, Baton Rouge, Louisiana 70804.

LOCATION OF WORK: In Lost Lake, Bayou DeCade, and Carencro Bayou, Sections 1, 2, 3, 4, 5, 6, 20, 21, 28, 29, 32, 33, and 34, T19 and 20S-R14E, approximately 23 miles southwesterly from Houma, Louisiana, in Terrebonne Parish, within the West Central Louisiana Coastal Basin in hydrologic unit (HUC 08090302), as shown on the attached drawings.

CHARACTER OF WORK: The applicant has requested Department of the Army authorization to hydraulically dredge Lost Lake and provide material for 643 acres of marsh creation in eight (8) different areas to include terraces. Additionally, five (5) fixed crest weir structures will be replaced with variable crest structures to improve hydrology within two (2) of the semi-impounded marsh creation areas. A dredge pipeline will be installed temporarily for the movement of the dredged material to the marsh creation areas. A permit for the primary activity was issued on February 24, 2014 and modified on November 24, 2014. The following items are additional modifications to the original

authorization. The applicant will add three (3) new areas of creation, modify the location of four (4) terraces, one (1) control structure will be extended, dykes will be modified to increase slope stability, one of the creation areas will be split into two sections to avoid a pipeline, a switch will be made from semi contained dykes to full earthen containment dykes, the depth of the dredged access channel will be increased by dredging, and the dredge pipeline will be buried under Bayou Decade and floated on pontoons to cross Whitson Pipeline and the rock revetment at Bayou Decade. Approximately 8,699,041.25 cubic yards of material will be dredged and deposited in areas of degraded marsh for marsh re-creation and construction of terraces covering 643 acres.

A Preliminary analysis has determined that the proposed project would temporarily impact 608 acres of jurisdictional waters bottoms at the project site.

The applicant has designed the project to avoid and minimize direct and secondary adverse impacts to the maximum extent practicable. The purpose of the project is to create marsh and further protect additional marsh from erosion, therefore not mitigation will be required.

The comment period for the Department of Army will close in **20 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC application number and be mailed to the Louisiana Department of Environmental Quality at the address above. Individuals or parties may request an extension of time in which to comment on the proposed work by writing or e-mailing the Corps of Engineers Project Manager listed above. Any request must be specific and substantively supportive of the requested extension, and received by this office prior to the end of the initial comment period. The Section Chief will review the request and the requestor will be promptly notified of the decision to grant or deny the request. If granted, the time extension will be continuous to the initial comment period and, inclusive of the initial comment period, will not exceed a total of 30 calendar days.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

Corps of Engineers Permit Criteria

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be

relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The US Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the US Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, pre-historical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources.

Our initial finding is that the proposed work would neither affect any species listed as endangered by the U.S. Departments of Interior or Commerce, nor affect any habitat designated as critical to the survival and recovery of any endangered species.

The New Orleans District has determined that the proposed project is located in waters known to be utilized by the West Indian Manatee (*Trichechus manatus*) and determined that the proposed activity is not likely to adversely affect the species based on the Standard Local Operating Procedure for Endangered Species of Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, Ecological Services Office.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of up to **608** acres of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the

proposed activity will not violate water quality standards will be required from the Department of Environmental Quality, Office of Environmental Services before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

JOHN M. HERMAN
Chief, Central Evaluation Section
Regulatory Branch

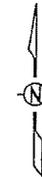
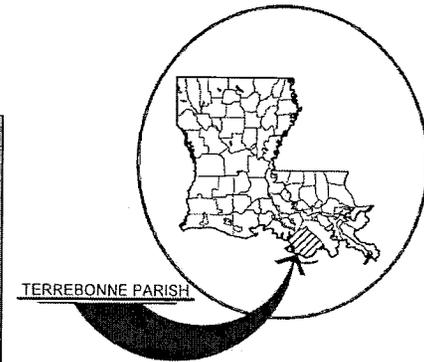
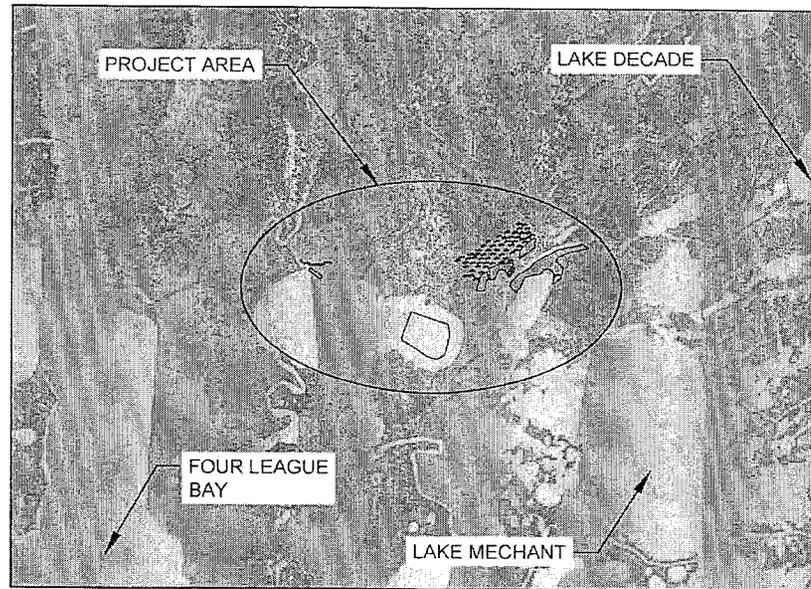
Enclosures

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STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

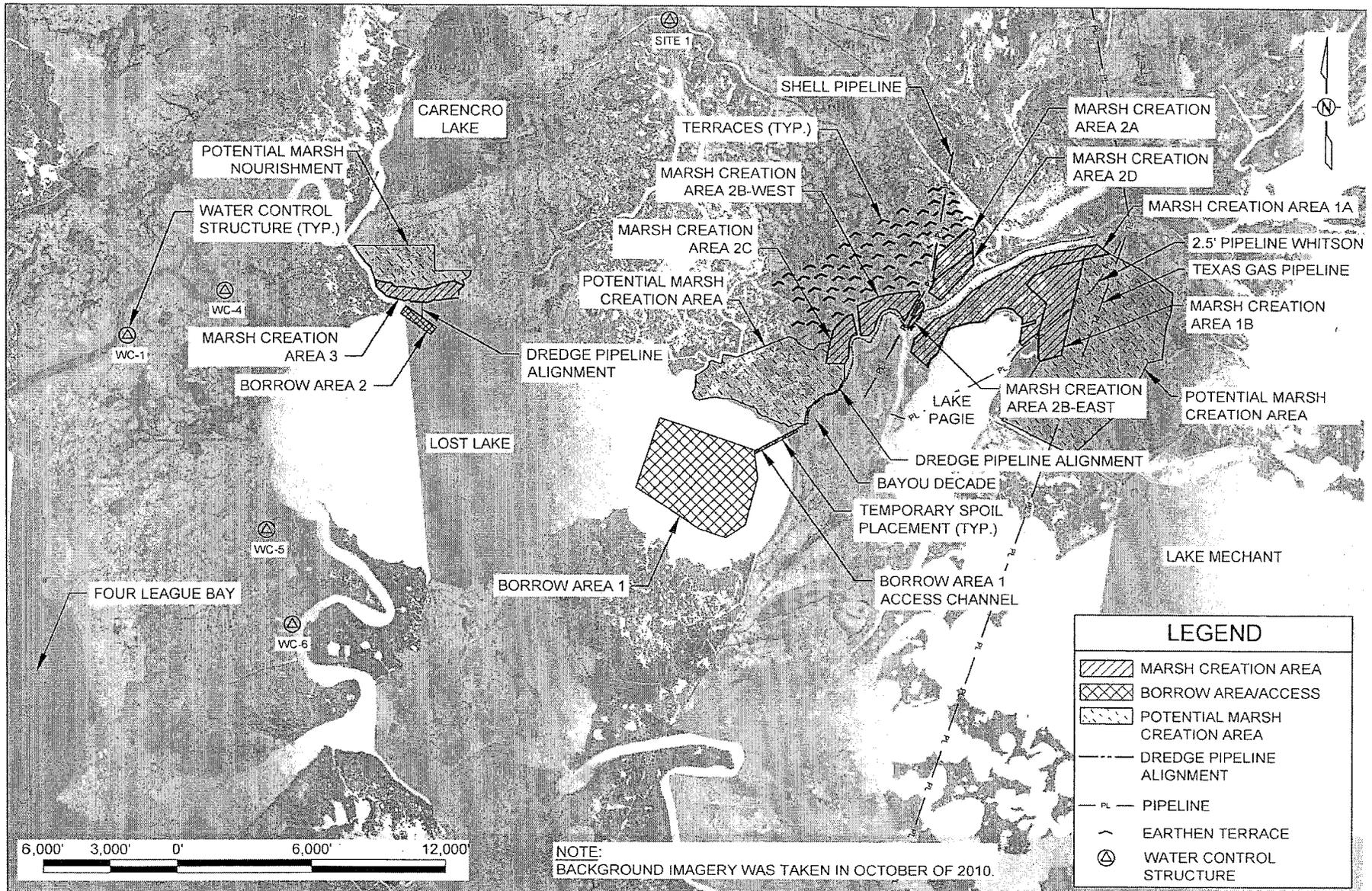
**LOST LAKE MARSH CREATION AND
HYDROLOGIC RESTORATION PROJECT**
TE-72
TERREBONNE PARISH



NOT FOR CONSTRUCTION

DOCUMENTS ARE NOT TO BE USED FOR
CONSTRUCTION, BIDDING, RECORDATION,
CONVEYANCE, OR SALES.

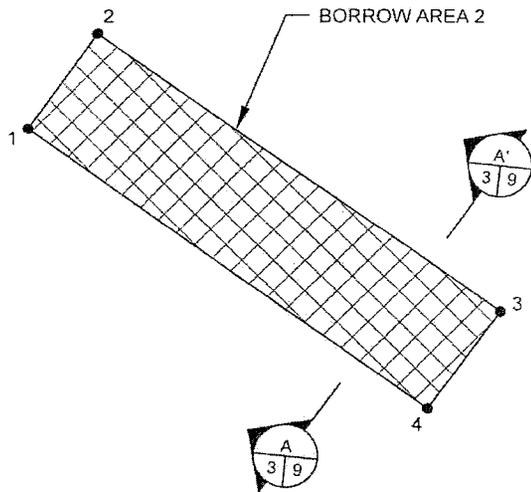
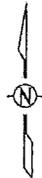
APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD SUITE 400 LAFAYETTE, LA 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	TITLE SHEET
			STATE PROJECT NUMBER: TE-72	DATE: OCTOBER 2015
DRAWN BY: SHANE FAUST	DESIGNED BY: S. HAYNES, P E	APPROVED BY: RUSS JOFFRION, P.E.	FEDERAL PROJECT NUMBER: TE-72	SHEET 1 OF 28



APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	PLAN VIEW
DRAWN BY: SHANE FAUST		DESIGNED BY: S. HAYNES, P.E.	STATE PROJECT NUMBER: TE-72
APPROVED BY: RUSS JOFFRION, P.E.		FEDERAL PROJECT NUMBER: TE-72	SHEET 2 OF 28

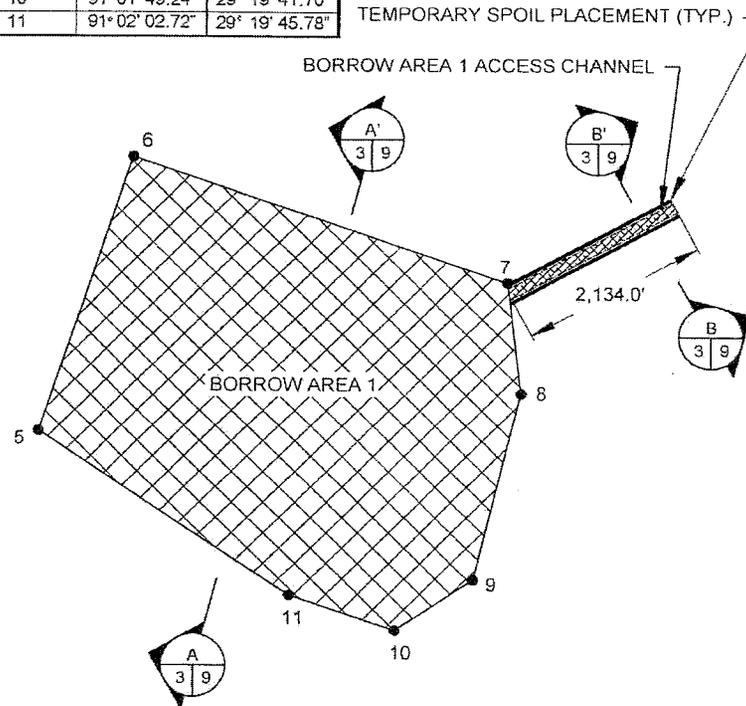
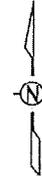
BORROW AREA 2 COORDINATES

POINT	LONGITUDE	LATITUDE
1	91° 04' 32.78"	29° 21' 22.59"
2	91° 04' 30.08"	29° 21' 25.85"
3	91° 04' 14.61"	29° 21' 16.33"
4	91° 04' 17.45"	29° 21' 13.01"



BORROW AREA 1 COORDINATES

POINT	LONGITUDE	LATITUDE
5	91° 02' 34.57"	29° 20' 04.59"
6	91° 02' 22.29"	29° 20' 35.93"
7	91° 01' 34.65"	29° 20' 21.47"
8	91° 01' 32.94"	29° 20' 08.78"
9	91° 01' 39.14"	29° 19' 47.45"
10	91° 01' 49.24"	29° 19' 41.70"
11	91° 02' 02.72"	29° 19' 45.78"



NOTES:

1. BORROW AREA 1 CONTAINS APPROXIMATELY 7,460,572.00 CUBIC YARDS OF MATERIAL.
2. BORROW AREA 2 CONTAINS APPROXIMATELY 259,689.75 CUBIC YARDS OF MATERIAL.



APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	BORROW AREA LAYOUT
			STATE PROJECT NUMBER: TE-72	DATE: OCTOBER 2015
DRAWN BY: SHANE FAUST	DESIGNED BY: S HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.	FEDERAL PROJECT NUMBER: TE-72	SHEET 3 OF 28

MARSH CREATION AREA 1B COORDINATES		
POINT	LONGITUDE	LATITUDE
18	90° 59' 02.98"	29° 21' 44.40"
19	90° 59' 14.32"	29° 21' 39.88"
20	90° 59' 18.15"	29° 21' 35.87"
21	90° 59' 15.49"	29° 21' 33.39"
22	90° 59' 08.13"	29° 21' 27.60"
23	90° 59' 11.97"	29° 21' 14.75"
41	90° 59' 12.22"	29° 21' 03.32"
42	90° 59' 11.28"	29° 21' 01.71"
43	90° 59' 00.89"	29° 21' 04.18"
44	90° 58' 49.73"	29° 21' 47.13"

MARSH CREATION AREA 1A COORDINATES		
POINT	LONGITUDE	LATITUDE
1	91° 00' 07.77"	29° 20' 58.95"
2	91° 00' 16.44"	29° 21' 05.56"
3	91° 00' 14.68"	29° 21' 11.53"
4	91° 00' 04.43"	29° 21' 20.47"
5	91° 00' 00.14"	29° 21' 21.68"
6	90° 59' 53.84"	29° 21' 25.05"
7	90° 59' 45.75"	29° 21' 33.03"
8	90° 59' 33.76"	29° 21' 39.33"
9	90° 59' 24.33"	29° 21' 43.67"
10	90° 59' 15.33"	29° 21' 48.17"
11	90° 59' 05.04"	29° 21' 50.39"
12	90° 59' 01.67"	29° 21' 50.97"
13	90° 58' 55.38"	29° 21' 51.47"
14	90° 58' 51.40"	29° 21' 52.72"
15	90° 58' 45.41"	29° 21' 53.57"
16	90° 58' 43.11"	29° 21' 54.09"
17	90° 58' 36.82"	29° 21' 49.79"
18	90° 59' 02.98"	29° 21' 44.40"
19	90° 59' 14.32"	29° 21' 39.88"
20	90° 59' 18.15"	29° 21' 35.87"
21	90° 59' 15.49"	29° 21' 33.39"
22	90° 59' 08.13"	29° 21' 27.60"
23	90° 59' 11.97"	29° 21' 14.75"
24	90° 59' 20.39"	29° 21' 08.50"
25	90° 59' 21.66"	29° 21' 09.69"
26	90° 59' 20.74"	29° 21' 16.80"
27	90° 59' 13.72"	29° 21' 18.75"
28	90° 59' 13.53"	29° 21' 20.21"
29	90° 59' 20.56"	29° 21' 18.26"
30	90° 59' 20.25"	29° 21' 20.66"
31	90° 59' 25.68"	29° 21' 24.99"
32	90° 59' 26.97"	29° 21' 25.46"
33	90° 59' 33.06"	29° 21' 24.83"
34	90° 59' 38.65"	29° 21' 20.10"
35	90° 59' 41.64"	29° 21' 19.19"
36	90° 59' 47.46"	29° 21' 18.86"
37	90° 59' 56.45"	29° 21' 16.39"
38	90° 59' 57.88"	29° 21' 15.45"
39	91° 00' 03.26"	29° 21' 04.81"
40	91° 00' 06.60"	29° 21' 02.38"

BAYOU DECADE

MARSH CREATION AREA 1A

LAKE PAGIE

EARTHEN CONTAINMENT DIKE BORROW AREA

MARSH CREATION AREA 1B

POTENTIAL MARSH CREATION AREA (~820 ACRES)

PIPELINE CROSSING

2.5" WHITSON PIPELINE

TEXAS GAS PIPELINE

DREDGE PIPELINE ALIGNMENT

EARTHEN CONTAINMENT DIKE

LEGEND

-  MARSH CREATION AREA
-  EARTHEN CONTAINMENT DIKE BORROW AREA
-  POTENTIAL MARSH CREATION AREA
-  DREDGE PIPELINE ALIGNMENT
-  EARTHEN CONTAINMENT DIKE
-  PIPELINE



NOTES:

1. EARTHEN CONTAINMENT DIKES MAY BE CONSTRUCTED WITHIN THE MARSH NOURISHMENT AREAS.
2. IF MARSH CREATION AREA 1B IS AWARDED FOR CONSTRUCTION, THE EARTHEN CONTAINMENT DIKE IN BETWEEN MARSH CREATION AREAS 1A AND 1B WILL NOT BE CONSTRUCTED.
3. LOCATION OF PIPELINE CROSSING TO BE DETERMINED DURING CONSTRUCTION.

APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	MARSH CREATION AREA 1A AND 1B LAYOUT
			STATE PROJECT NUMBER: TE-72	DATE: OCTOBER 2015
DRAWN BY: SHANE FAUST	DESIGNED BY: S. HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.	FEDERAL PROJECT NUMBER: TE-72	SHEET 4 OF 28

MARSH CREATION AREA 2A COORDINATES			
POINT	LONGITUDE	LATITUDE	
76	91° 00' 05.22"	29° 21' 38.79"	
77	91° 00' 03.20"	29° 21' 48.87"	
78	90° 59' 47.85"	29° 22' 00.93"	
79	90° 59' 44.39"	29° 22' 00.11"	
80	90° 59' 43.86"	29° 21' 58.20"	
81	90° 59' 44.77"	29° 21' 56.88"	
82	90° 59' 46.25"	29° 21' 55.97"	
83	90° 59' 45.43"	29° 21' 54.24"	
84	90° 59' 45.23"	29° 21' 49.90"	
85	90° 59' 46.38"	29° 21' 49.93"	
86	90° 59' 48.55"	29° 21' 49.12"	
87	90° 59' 52.69"	29° 21' 45.55"	
88	90° 59' 56.29"	29° 21' 43.46"	
89	90° 59' 58.57"	29° 21' 41.86"	
90	91° 00' 04.32"	29° 21' 37.73"	

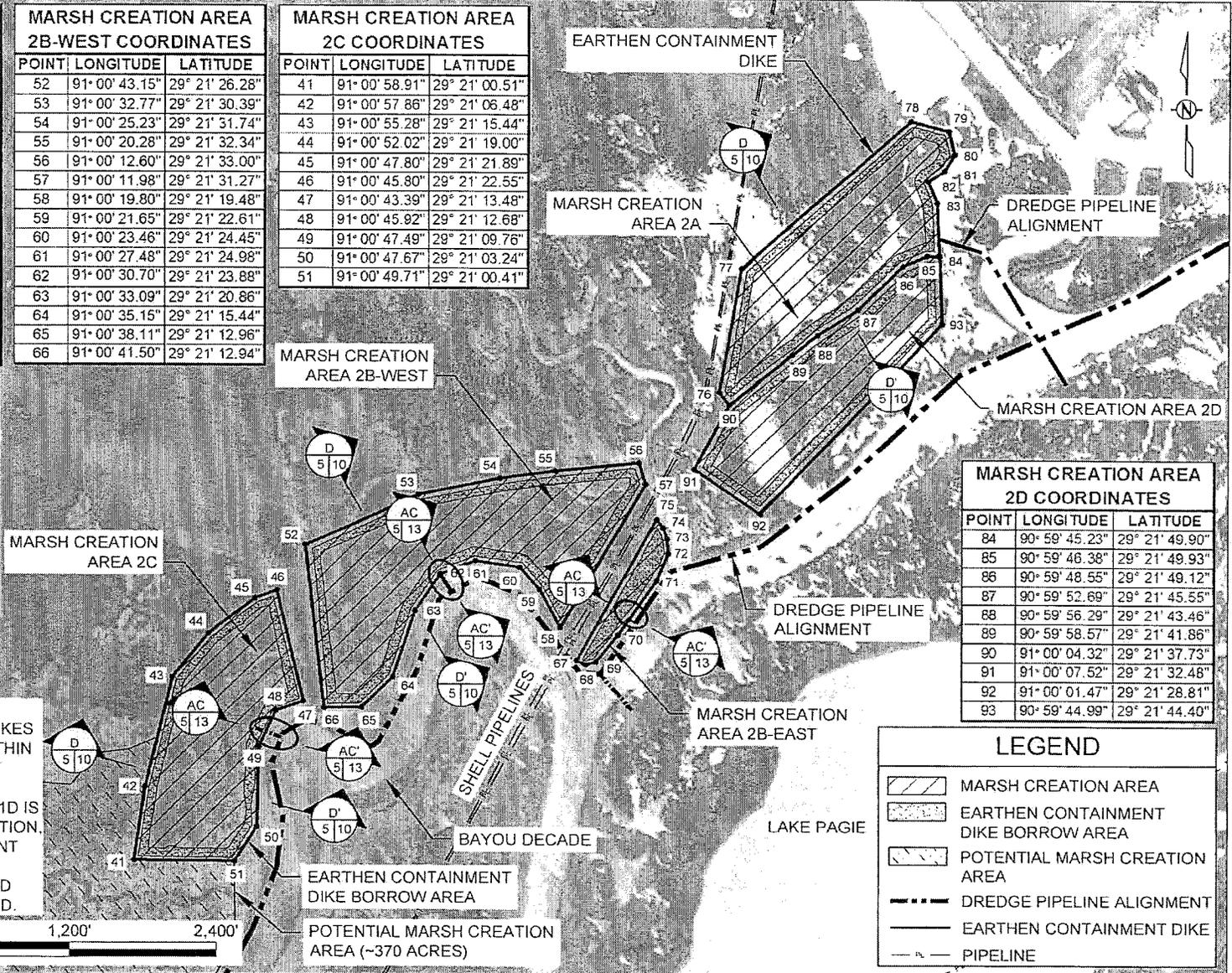
MARSH CREATION AREA 2B-WEST COORDINATES			
POINT	LONGITUDE	LATITUDE	
52	91° 00' 43.15"	29° 21' 26.28"	
53	91° 00' 32.77"	29° 21' 30.39"	
54	91° 00' 25.23"	29° 21' 31.74"	
55	91° 00' 20.28"	29° 21' 32.34"	
56	91° 00' 12.60"	29° 21' 33.00"	
57	91° 00' 11.98"	29° 21' 31.27"	
58	91° 00' 19.80"	29° 21' 19.48"	
59	91° 00' 21.65"	29° 21' 22.61"	
60	91° 00' 23.46"	29° 21' 24.45"	
61	91° 00' 27.48"	29° 21' 24.98"	
62	91° 00' 30.70"	29° 21' 23.88"	
63	91° 00' 33.09"	29° 21' 20.86"	
64	91° 00' 35.15"	29° 21' 15.44"	
65	91° 00' 38.11"	29° 21' 12.96"	
66	91° 00' 41.50"	29° 21' 12.94"	

MARSH CREATION AREA 2C COORDINATES			
POINT	LONGITUDE	LATITUDE	
41	91° 00' 58.91"	29° 21' 00.51"	
42	91° 00' 57.86"	29° 21' 06.48"	
43	91° 00' 55.28"	29° 21' 15.44"	
44	91° 00' 52.02"	29° 21' 19.00"	
45	91° 00' 47.80"	29° 21' 21.89"	
46	91° 00' 45.80"	29° 21' 22.55"	
47	91° 00' 43.39"	29° 21' 13.48"	
48	91° 00' 45.92"	29° 21' 12.68"	
49	91° 00' 47.49"	29° 21' 09.76"	
50	91° 00' 47.67"	29° 21' 03.24"	
51	91° 00' 49.71"	29° 21' 00.41"	

MARSH CREATION AREA 2B-EAST COORDINATES			
POINT	LONGITUDE	LATITUDE	
67	91° 00' 18.31"	29° 21' 16.78"	
68	91° 00' 17.53"	29° 21' 16.43"	
69	91° 00' 16.56"	29° 21' 16.65"	
70	91° 00' 14.54"	29° 21' 18.87"	
71	91° 00' 10.97"	29° 21' 23.38"	
72	91° 00' 09.93"	29° 21' 25.24"	
73	91° 00' 10.02"	29° 21' 26.78"	
74	91° 00' 10.36"	29° 21' 27.67"	
75	91° 00' 10.95"	29° 21' 28.41"	

MARSH CREATION AREA 2D COORDINATES			
POINT	LONGITUDE	LATITUDE	
84	90° 59' 45.23"	29° 21' 49.90"	
85	90° 59' 46.38"	29° 21' 49.93"	
86	90° 59' 48.55"	29° 21' 49.12"	
87	90° 59' 52.69"	29° 21' 45.55"	
88	90° 59' 56.29"	29° 21' 43.46"	
89	90° 59' 58.57"	29° 21' 41.86"	
90	91° 00' 04.32"	29° 21' 37.73"	
91	91° 00' 07.52"	29° 21' 32.48"	
92	91° 00' 01.47"	29° 21' 28.81"	
93	90° 59' 44.99"	29° 21' 44.40"	

- NOTES:
- EARTHEN CONTAINMENT DIKES MAY BE CONSTRUCTED WITHIN THE MARSH NOURISHMENT AREAS.
 - IF MARSH CREATION AREA 1D IS AWARDED FOR CONSTRUCTION, THE EARTHEN CONTAINMENT DIKE IN BETWEEN MARSH CREATION AREAS 2A AND 2D WILL NOT BE CONSTRUCTED.



LEGEND	
	MARSH CREATION AREA
	EARTHEN CONTAINMENT DIKE BORROW AREA
	POTENTIAL MARSH CREATION AREA
	DREDGE PIPELINE ALIGNMENT
	EARTHEN CONTAINMENT DIKE
	PIPELINE

APPLICATION BY:
 UNITED STATES FISH AND WILDLIFE SERVICE
 646 CAJUNDOME BLVD. SUITE 400
 LAFAYETTE, LA. 70506

COASTAL PROTECTION AND RESTORATION AUTHORITY
 450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

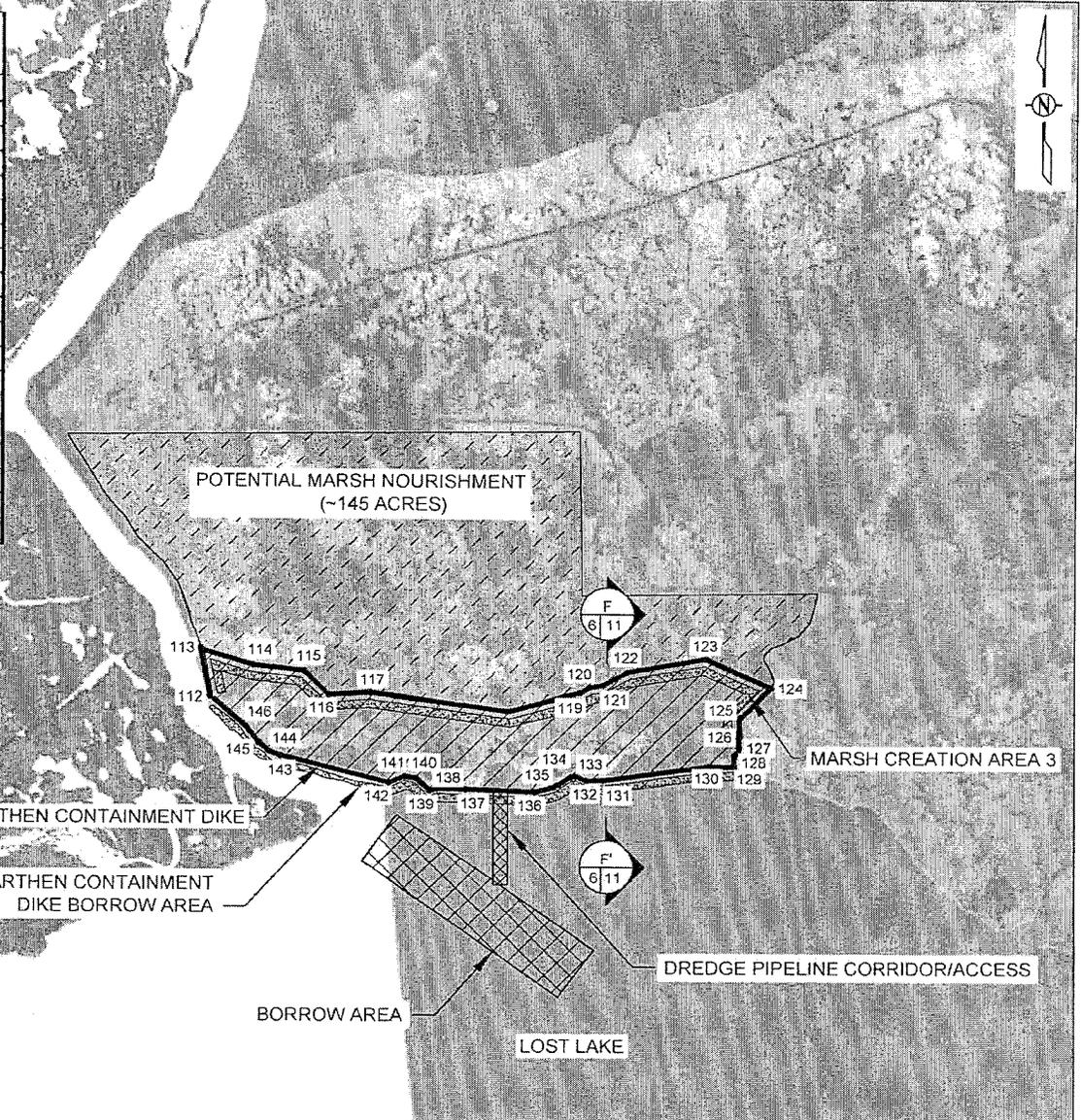
LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT

STATE PROJECT NUMBER: TE-72
 FEDERAL PROJECT NUMBER: TE-72

MARSH CREATION AREA 2A, 2B, 2C, & 2D LAYOUT

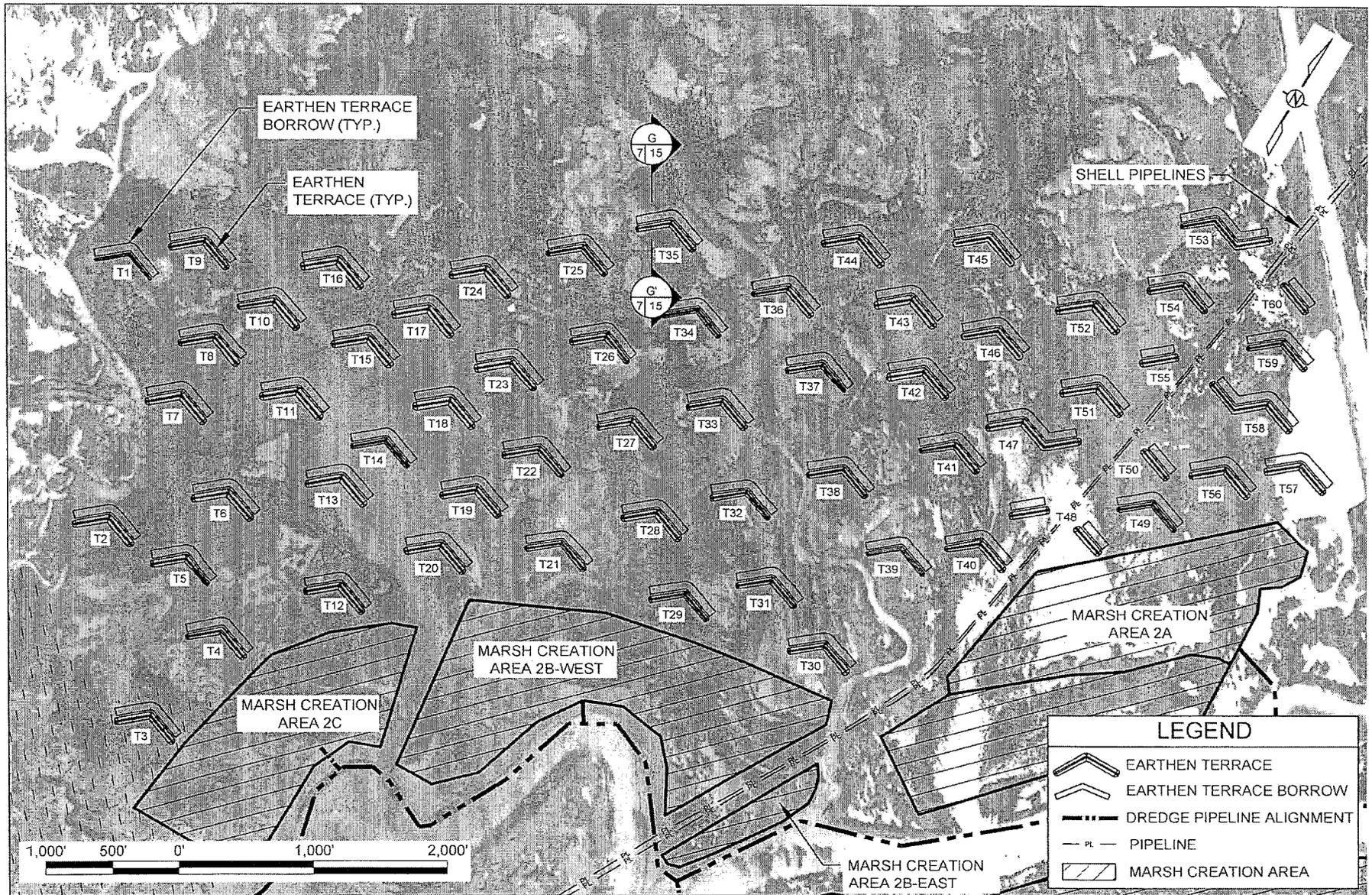
DATE: OCTOBER 2015
 SHEET 5 OF 28

MARSH CREATION AREA 3 COORDINATES			MARSH CREATION AREA 3 COORDINATES		
POINT	LONGITUDE	LATITUDE	POINT	LONGITUDE	LATITUDE
112	91° 04' 44.82"	29° 21' 34.20"	129	91° 04' 03.55"	29° 21' 29.26"
113	91° 04' 44.18"	29° 21' 34.51"	130	91° 04' 05.57"	29° 21' 29.28"
114	91° 04' 42.87"	29° 21' 34.67"	131	91° 04' 13.89"	29° 21' 28.26"
115	91° 04' 40.83"	29° 21' 33.13"	132	91° 04' 15.21"	29° 21' 28.25"
116	91° 04' 39.75"	29° 21' 31.94"	133	91° 04' 16.03"	29° 21' 28.25"
117	91° 04' 39.26"	29° 21' 31.58"	134	91° 04' 16.46"	29° 21' 28.51"
118	91° 04' 30.83"	29° 21' 29.66"	135	91° 04' 17.73"	29° 21' 27.81"
119	91° 04' 29.63"	29° 21' 30.07"	136	91° 04' 19.27"	29° 21' 27.45"
120	91° 04' 27.75"	29° 21' 29.81"	137	91° 04' 24.73"	29° 21' 27.64"
121	91° 04' 27.00"	29° 21' 29.18"	138	91° 04' 27.00"	29° 21' 27.69"
122	91° 04' 19.45"	29° 21' 28.95"	139	91° 04' 27.51"	29° 21' 27.56"
123	91° 04' 18.41"	29° 21' 29.19"	140	91° 04' 28.54"	29° 21' 28.42"
124	91° 04' 17.08"	29° 21' 29.93"	141	91° 04' 29.44"	29° 21' 28.54"
125	91° 04' 15.80"	29° 21' 30.11"	142	91° 04' 30.71"	29° 21' 28.10"
126	91° 04' 14.85"	29° 21' 29.74"	143	91° 04' 39.27"	29° 21' 30.02"
127	91° 04' 5.58"	29° 21' 30.77"	144	91° 04' 40.11"	29° 21' 30.26"
128	91° 04' 3.16"	29° 21' 30.72"	145	91° 04' 40.96"	29° 21' 30.89"
			146	91° 04' 42.06"	29° 21' 32.09"



LEGEND	
	BORROW AREA
	MARSH CREATION AREA
	EARTHEN CONTAINMENT DIKE BORROW AREA
	DREDGE PIPELINE CORRIDOR/ACCESS
	POTENTIAL MARSH NOURISHMENT
	EARTHEN CONTAINMENT DIKE

APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	MARSH CREATION AREA 3 LAYOUT
		STATE PROJECT NUMBER: TE-72	DATE: OCTOBER 2015
DRAWN BY: SHANE FAUST	DESIGNED BY: TRAVIS BYLAND, E.I.	APPROVED BY: JASON LANCIOS, P.E.	FEDERAL PROJECT NUMBER: TE-72
			SHEET 6 OF 28



APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD. SUITE 400 LAFAYETTE, LA. 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	EARTHEN TERRACE LAYOUT	
DRAWN BY: SHANE FAUST		DESIGNED BY: S. HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.	STATE PROJECT NUMBER: TE-72 FEDERAL PROJECT NUMBER: TE-72

TERRACE COORDINATES		
TERRACE	LONGITUDE	LATITUDE
T1	91° 01' 24.72"	29° 21' 34.66"
	91° 01' 22.54"	29° 21' 36.24"
	91° 01' 19.90"	29° 21' 35.38"
T2	91° 01' 15.09"	29° 21' 16.79"
	91° 01' 12.91"	29° 21' 18.37"
	91° 01' 10.26"	29° 21' 17.50"
T3	91° 01' 03.73"	29° 21' 05.51"
	91° 01' 01.55"	29° 21' 07.09"
	91° 00' 58.90"	29° 21' 06.22"
T4	91° 01' 02.05"	29° 21' 13.61"
	91° 00' 59.87"	29° 21' 15.19"
	91° 00' 57.22"	29° 21' 14.32"
T5	91° 01' 07.69"	29° 21' 17.02"
	91° 01' 05.51"	29° 21' 18.60"
	91° 01' 02.86"	29° 21' 17.73"
T6	91° 01' 07.39"	29° 21' 22.86"
	91° 01' 05.21"	29° 21' 24.44"
	91° 01' 02.57"	29° 21' 23.57"
T7	91° 01' 14.91"	29° 21' 27.45"
	91° 01' 12.74"	29° 21' 29.03"
	91° 01' 10.09"	29° 21' 28.16"
T8	91° 01' 14.96"	29° 21' 32.45"
	91° 01' 12.78"	29° 21' 34.02"
	91° 01' 10.13"	29° 21' 33.16"
T9	91° 01' 19.72"	29° 21' 38.28"
	91° 01' 17.54"	29° 21' 39.86"
	91° 01' 14.90"	29° 21' 39.00"
T10	101° 28' 40.52"	37° 24' 33.09"
	101° 28' 38.77"	37° 24' 35.10"
	101° 28' 40.09"	37° 24' 37.32"
T11	101° 28' 47.17"	37° 24' 37.37"
	101° 28' 45.43"	37° 24' 39.39"
	101° 28' 46.74"	37° 24' 41.60"
T12	101° 29' 01.98"	37° 24' 46.26"
	101° 29' 00.23"	37° 24' 48.28"
	101° 29' 01.55"	37° 24' 50.49"
T13	91° 00' 59.85"	29° 21' 27.92"
	91° 00' 57.67"	29° 21' 29.49"
	91° 00' 55.02"	29° 21' 28.63"
T14	91° 00' 58.18"	29° 21' 31.97"
	91° 00' 56.00"	29° 21' 33.55"
	91° 00' 53.35"	29° 21' 32.68"
T15	91° 01' 03.82"	29° 21' 37.93"
	91° 01' 01.65"	29° 21' 39.50"
	91° 00' 59.00"	29° 21' 38.64"
T16	91° 01' 09.34"	29° 21' 41.87"
	91° 01' 07.16"	29° 21' 43.44"
	91° 01' 04.51"	29° 21' 42.58"

TERRACE COORDINATES		
TERRACE	LONGITUDE	LATITUDE
T17	91° 01' 00.64"	29° 21' 42.08"
	91° 00' 58.46"	29° 21' 43.66"
	91° 00' 55.81"	29° 21' 42.79"
T18	91° 00' 55.18"	29° 21' 36.94"
	91° 00' 53.00"	29° 21' 38.51"
	91° 00' 50.36"	29° 21' 37.65"
T19	91° 00' 49.49"	29° 21' 32.13"
	91° 00' 47.31"	29° 21' 33.71"
	91° 00' 44.67"	29° 21' 32.84"
T20	91° 00' 49.70"	29° 21' 27.18"
	91° 00' 47.52"	29° 21' 28.75"
	91° 00' 44.88"	29° 21' 27.89"
T21	91° 00' 41.12"	29° 21' 31.72"
	91° 00' 38.94"	29° 21' 33.30"
	91° 00' 36.29"	29° 21' 32.43"
T22	91° 00' 46.68"	29° 21' 37.00"
	91° 00' 44.50"	29° 21' 38.57"
	91° 00' 41.86"	29° 21' 37.71"
T23	91° 00' 52.34"	29° 21' 41.64"
	91° 00' 50.16"	29° 21' 43.22"
	91° 00' 47.52"	29° 21' 42.35"
T24	91° 00' 58.12"	29° 21' 46.73"
	91° 00' 55.94"	29° 21' 48.30"
	91° 00' 53.29"	29° 21' 47.44"
T25	91° 00' 52.13"	29° 21' 51.64"
	91° 00' 49.95"	29° 21' 53.22"
	91° 00' 47.30"	29° 21' 52.35"
T26	91° 00' 46.68"	29° 21' 46.78"
	91° 00' 44.50"	29° 21' 48.35"
	91° 00' 41.86"	29° 21' 47.49"
T27	91° 00' 41.13"	29° 21' 42.23"
	91° 00' 38.96"	29° 21' 43.80"
	91° 00' 36.30"	29° 21' 42.94"
T28	91° 00' 35.42"	29° 21' 37.23"
	91° 00' 33.24"	29° 21' 38.80"
	91° 00' 30.59"	29° 21' 37.94"
T29	91° 00' 29.91"	29° 21' 32.98"
	91° 00' 27.73"	29° 21' 34.55"
	91° 00' 25.08"	29° 21' 33.69"
T30	91° 00' 17.65"	29° 21' 34.71"
	91° 00' 15.47"	29° 21' 36.29"
	91° 00' 12.83"	29° 21' 35.42"
T31	91° 00' 24.15"	29° 21' 37.06"
	91° 00' 21.97"	29° 21' 38.63"
	91° 00' 19.33"	29° 21' 37.77"
T32	91° 00' 29.75"	29° 21' 41.86"
	91° 00' 27.57"	29° 21' 43.43"
	91° 00' 24.92"	29° 21' 42.57"

TERRACE COORDINATES		
TERRACE	LONGITUDE	LATITUDE
T33	91° 00' 35.34"	29° 21' 46.87"
	91° 00' 33.16"	29° 21' 48.44"
	91° 00' 30.52"	29° 21' 47.58"
T34	91° 00' 41.07"	29° 21' 51.85"
	91° 00' 38.89"	29° 21' 53.43"
	91° 00' 36.24"	29° 21' 52.56"
T35	91° 00' 46.65"	29° 21' 56.51"
	91° 00' 44.47"	29° 21' 58.09"
	91° 00' 41.83"	29° 21' 57.22"
T36	91° 00' 35.41"	29° 21' 56.56"
	91° 00' 33.23"	29° 21' 58.14"
	91° 00' 30.59"	29° 21' 57.27"
T37	91° 00' 29.71"	29° 21' 52.86"
	91° 00' 27.53"	29° 21' 54.44"
	91° 00' 24.88"	29° 21' 53.57"
T38	91° 00' 23.77"	29° 21' 46.85"
	91° 00' 21.59"	29° 21' 48.43"
	91° 00' 18.94"	29° 21' 47.56"
T39	91° 00' 16.21"	29° 21' 43.84"
	91° 00' 14.03"	29° 21' 45.42"
	91° 00' 11.39"	29° 21' 44.55"
T40	91° 00' 10.65"	29° 21' 47.09"
	91° 00' 08.47"	29° 21' 48.66"
	91° 00' 05.82"	29° 21' 47.80"
T41	91° 00' 16.71"	29° 21' 52.53"
	91° 00' 14.54"	29° 21' 54.10"
	91° 00' 11.89"	29° 21' 53.24"
T42	91° 00' 22.11"	29° 21' 56.20"
	91° 00' 19.93"	29° 21' 57.77"
	91° 00' 17.28"	29° 21' 56.91"
T43	91° 00' 26.08"	29° 22' 00.39"
	91° 00' 23.90"	29° 22' 01.97"
	91° 00' 21.25"	29° 22' 01.10"
T44	91° 00' 32.50"	29° 22' 02.42"
	91° 00' 30.32"	29° 22' 03.99"
	91° 00' 27.67"	29° 22' 03.13"
T45	91° 00' 23.00"	29° 22' 07.25"
	91° 00' 20.82"	29° 22' 08.82"
	91° 00' 18.18"	29° 22' 07.96"
T46	91° 00' 18.45"	29° 22' 01.52"
	91° 00' 16.28"	29° 22' 03.10"
	91° 00' 13.63"	29° 22' 02.23"
T47	91° 00' 12.79"	29° 21' 56.53"
	91° 00' 10.62"	29° 21' 58.11"
	91° 00' 08.00"	29° 21' 57.26"
	91° 00' 05.82"	29° 21' 58.84"

TERRACE'S COORDINATES		
TERRACE	LONGITUDE	LATITUDE
T48	91° 00' 07.34"	29° 21' 51.64"
	91° 00' 05.14"	29° 21' 53.23"
	91° 00' 02.09"	29° 21' 53.11"
T49	90° 59' 59.68"	29° 21' 52.32"
	90° 59' 58.98"	29° 21' 55.90"
	90° 59' 57.80"	29° 21' 57.48"
T50	90° 59' 55.15"	29° 21' 56.61"
	91° 00' 03.28"	29° 21' 59.16"
	91° 00' 01.10"	29° 22' 00.74"
T51	90° 59' 58.45"	29° 21' 59.87"
	91° 00' 08.91"	29° 22' 01.44"
	91° 00' 06.73"	29° 22' 03.01"
T52	91° 00' 04.08"	29° 22' 02.15"
	91° 00' 12.71"	29° 22' 06.66"
	91° 00' 10.53"	29° 22' 08.24"
T53	91° 00' 07.88"	29° 22' 07.37"
	91° 00' 07.02"	29° 22' 16.59"
	91° 00' 04.85"	29° 22' 18.17"
T54	91° 00' 02.20"	29° 22' 17.30"
	91° 00' 07.05"	29° 22' 11.24"
	91° 00' 04.87"	29° 22' 12.61"
T55	91° 00' 02.22"	29° 22' 11.95"
	91° 00' 04.14"	29° 22' 06.27"
	91° 00' 01.96"	29° 22' 07.85"
T56	90° 59' 59.31"	29° 22' 06.98"
	90° 59' 56.09"	29° 22' 00.80"
	90° 59' 53.91"	29° 22' 02.36"
T57	90° 59' 51.26"	29° 22' 01.51"
	90° 59' 50.75"	29° 22' 03.85"
	90° 59' 48.57"	29° 22' 05.43"
T58	90° 59' 45.92"	29° 22' 04.56"
	90° 59' 55.80"	29° 22' 06.62"
	90° 59' 53.62"	29° 22' 08.19"
T59	90° 59' 50.97"	29° 22' 07.33"
	90° 59' 57.35"	29° 22' 11.18"
	90° 59' 55.17"	29° 22' 12.75"
T60	90° 59' 52.52"	29° 22' 11.89"
	91° 00' 00.50"	29° 22' 15.23"
	90° 59' 58.33"	29° 22' 16.80"
	90° 59' 55.68"	29° 22' 15.94"

APPLICATION BY:
 UNITED STATES FISH AND WILDLIFE SERVICE
 646 CAJUNDOME BLVD, SUITE 400
 LAFAYETTE, LA 70506

COASTAL PROTECTION AND RESTORATION AUTHORITY
 450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT
 STATE PROJECT NUMBER TE-72

TERRACE COORDINATES
 DATE: OCTOBER 2015

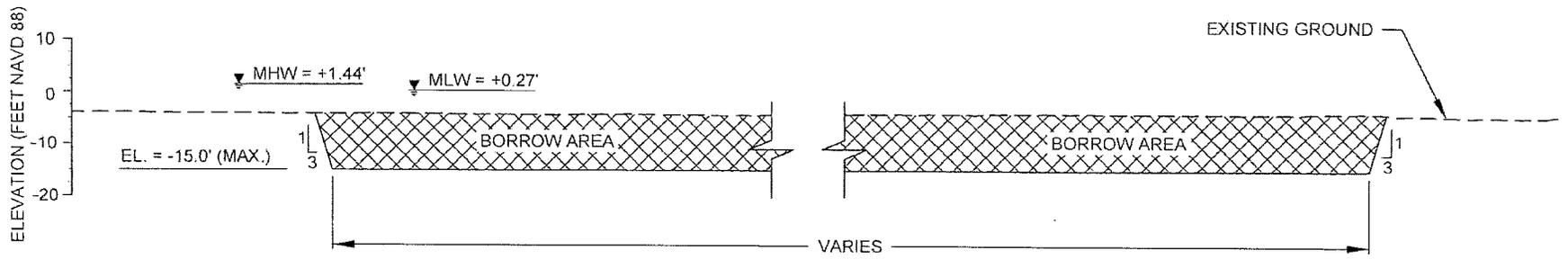
DRAWN BY: SHANE FAUST

DESIGNED BY: S. HAYNES, P.E.

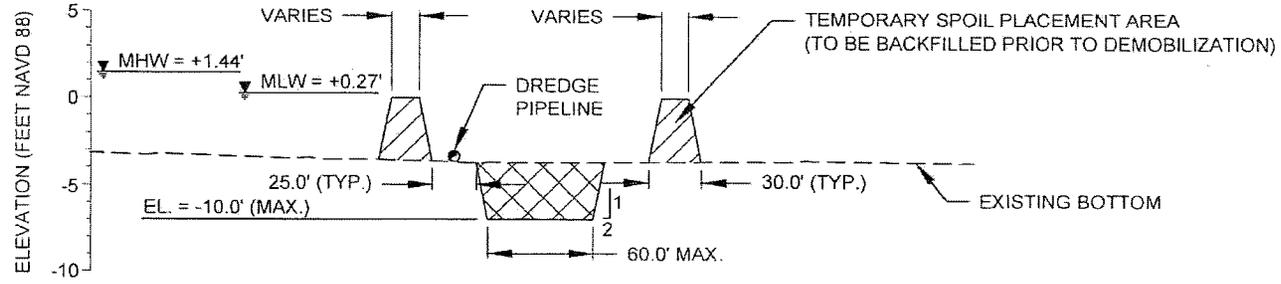
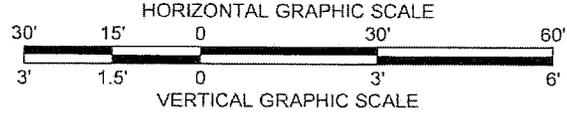
APPROVED BY: RUSS JOFFRION, P.E.

FEDERAL PROJECT NUMBER TE-72

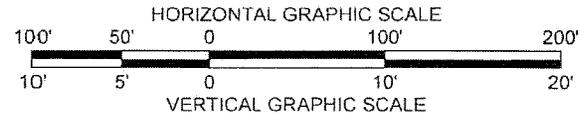
SHEET 8 OF 28



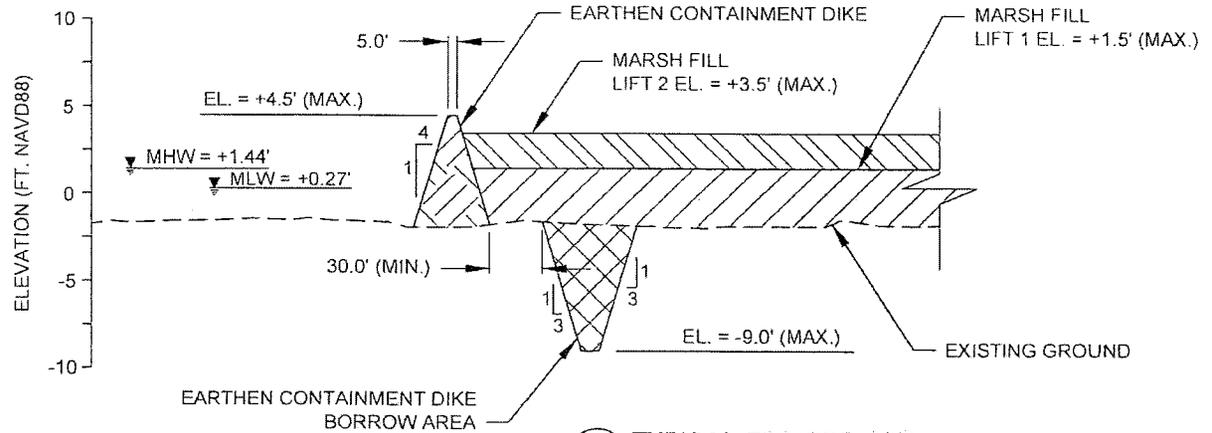
A-A'
9 | 3
TYPICAL BORROW AREA SECTION



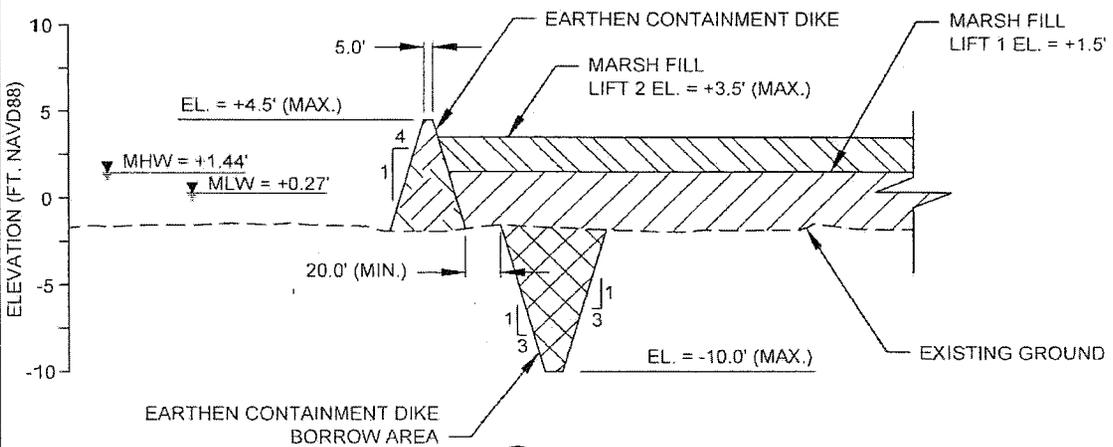
B-B'
9 | 3
TYPICAL BORROW AREA 1 ACCESS CHANNEL SECTION



APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD SUITE 400 LAFAYETTE, LA 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	TYPICAL BORROW AND ACCESS CHANNEL SECTIONS
DRAWN BY: SHANE FAUST		DESIGNED BY: S. HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.
		DATE: OCTOBER 2015 SHEET 9 OF 28	



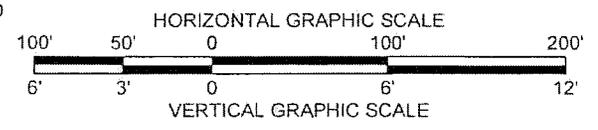
C-C'
10 | 4
TYPICAL FILL SECTION
MARSH CREATION AREA 1A AND 1B



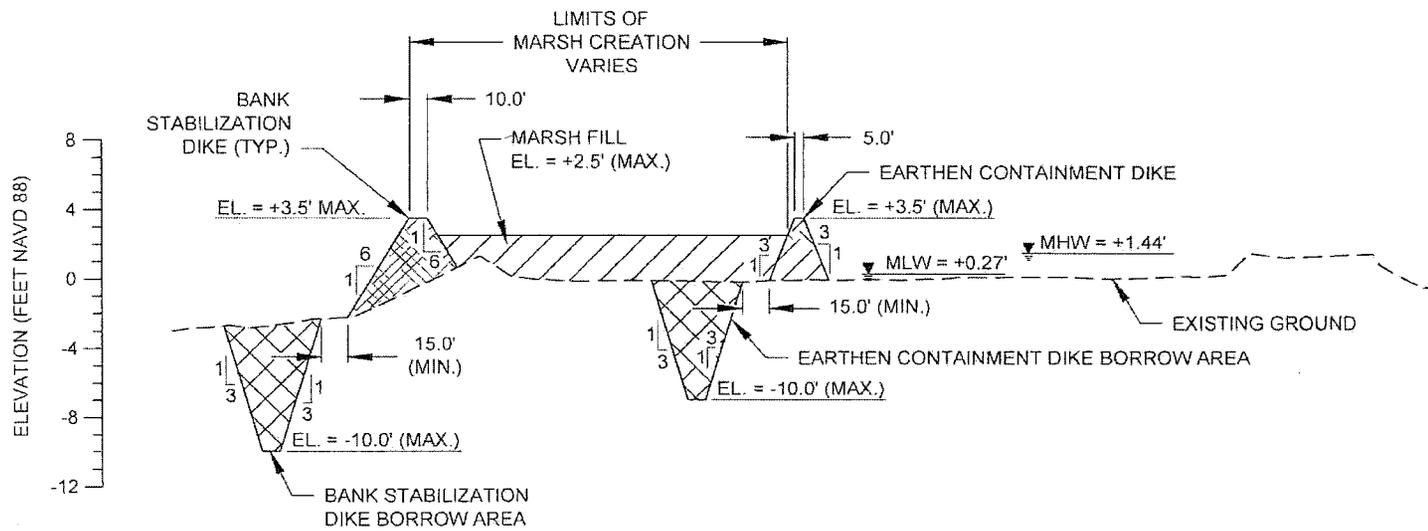
D-D'
10 | 5
TYPICAL FILL SECTION
MARSH CREATION AREAS 2A, 2B (EAST AND WEST), 2C, AND 2D

NOTES:

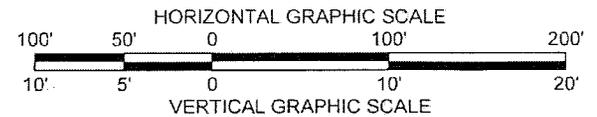
1. CONTAINMENT DIKES SHALL BE CONSTRUCTED USING IN-SITU MATERIAL.
2. NO DREDGING WILL BE ALLOWED WITHIN 20.0' OR 30.0' OF THE CONTAINMENT DIKE TO EARTHEN CONTAINMENT DIKE BORROW AREAS.



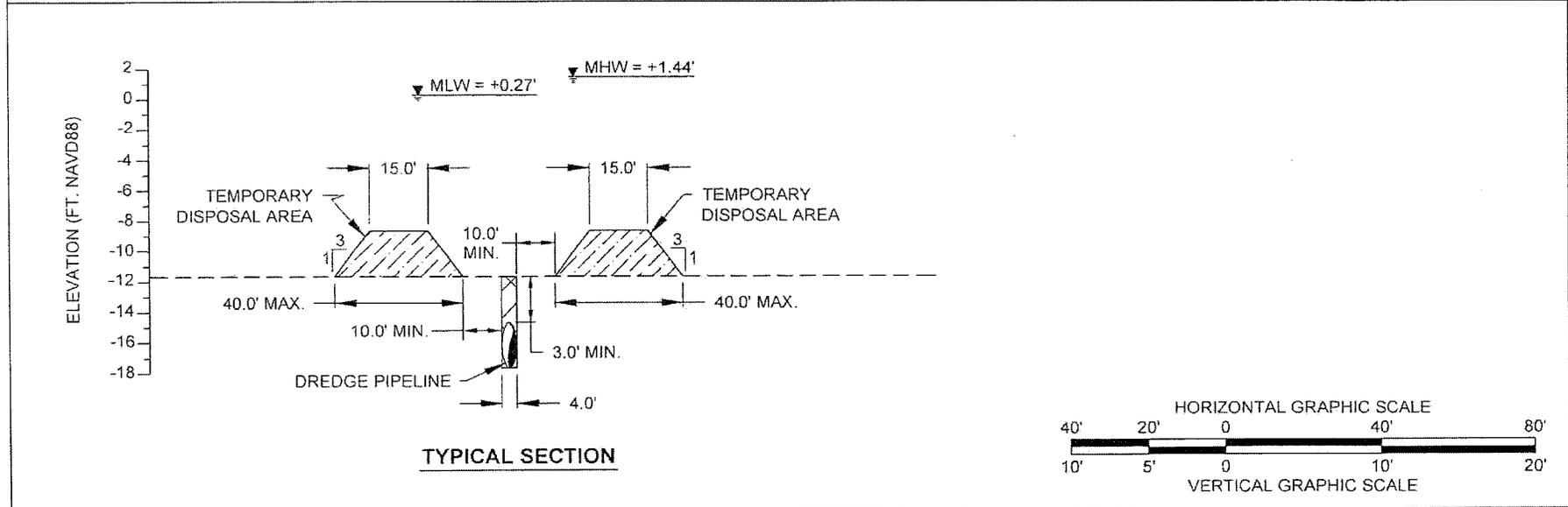
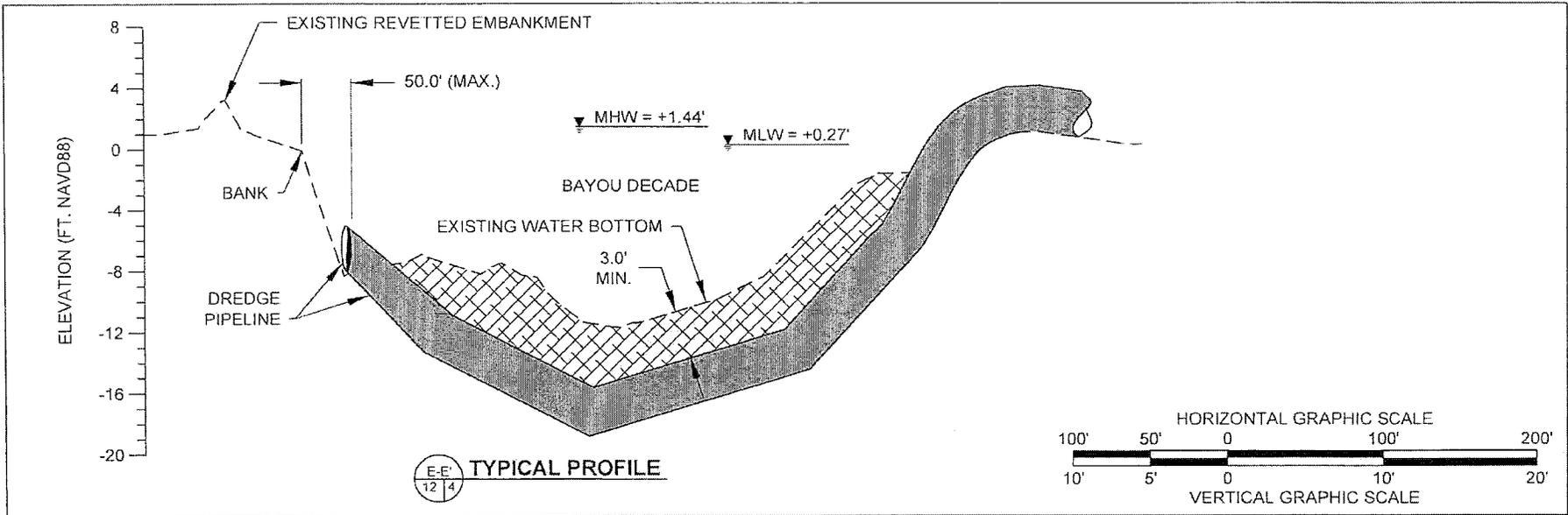
APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 645 CAJUNDOME BLVD SUITE 400 LAFAYETTE, LA 70508	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGICAL RESTORATION PROJECT	TYPICAL CONTAINMENT DIKE AND FILL SECTIONS
DRAWN BY: SHANE FAUST	DESIGNED BY: S. HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.	STATE PROJECT NUMBER: TE-72
FEDERAL PROJECT NUMBER: TE-72			DATE: OCTOBER 2015
SHEET 10 OF 28			



F-F
11 6
**TYPICAL MARSH FILL
AREA 3 SECTION**



APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70598	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGICAL RESTORATION PROJECT	TYPICAL BANK STABILIZATION AND CONTAINMENT DIKES AND FILL SECTION
DRAWN BY SHANE FAUST		DESIGNED BY: S. HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.
			FEDERAL PROJECT NUMBER: TE-72
			DATE: OCTOBER 2015 SHEET 11 OF 28



APPLICATION BY:
 UNITED STATES FISH AND WILDLIFE SERVICE
 646 CAJUNDOME BLVD, SUITE 400
 LAFAYETTE, LA. 70598

COASTAL PROTECTION AND RESTORATION AUTHORITY
 450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

LOST LAKE MARSH CREATION AND HYDROLOGICAL RESTORATION PROJECT
 STATE PROJECT NUMBER: TE-72

BAYOU DECADE DREDGE PIPELINE ALIGNMENT
 DATE: OCTOBER 2015

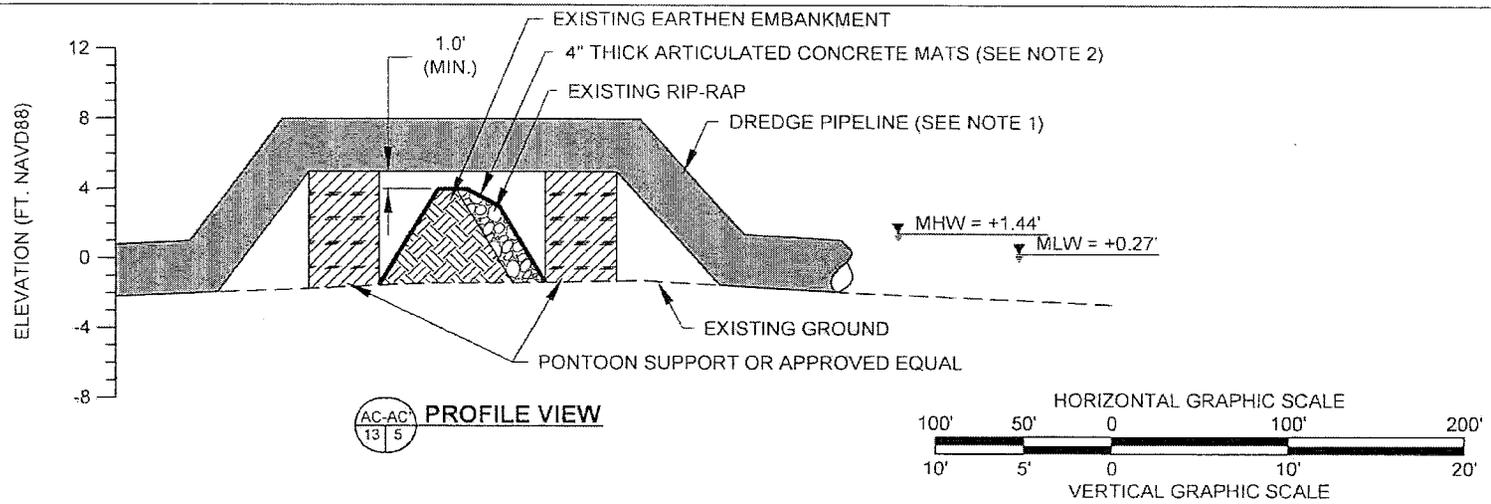
DRAWN BY: SHANE FAUST

DESIGNED BY: S HAYNES, P.E.

APPROVED BY: RUSS JOFFRION, P.E.

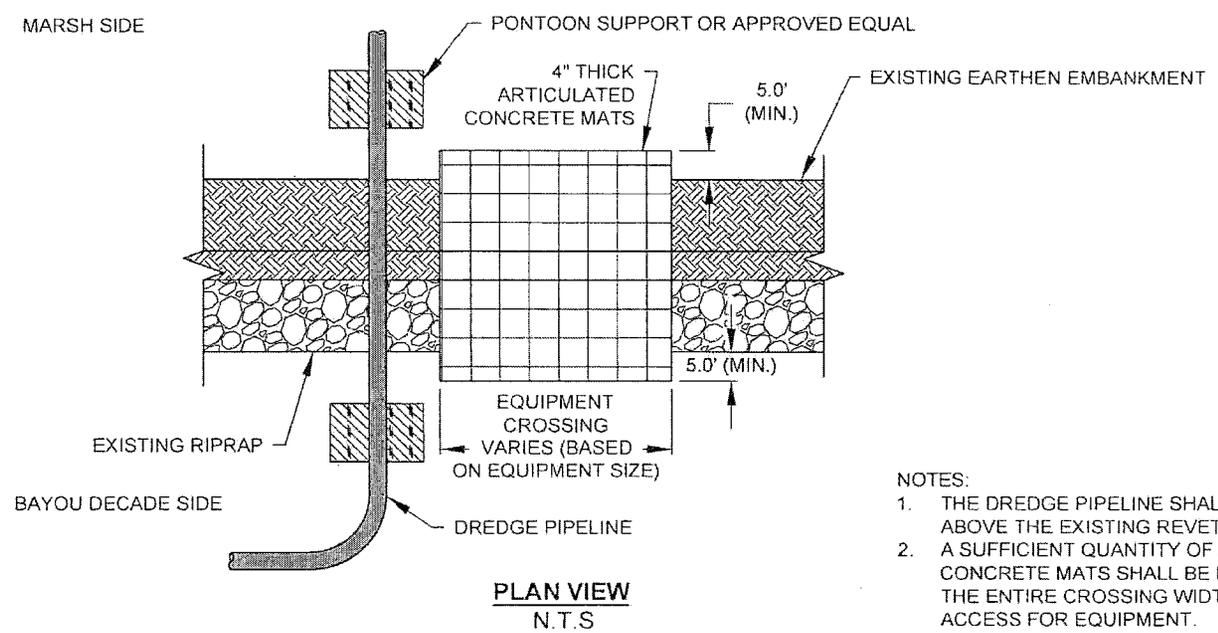
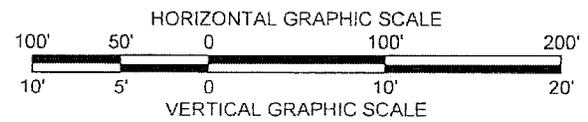
FEDERAL PROJECT NUMBER: TE-72

SHEET 12 OF 28



AC-AC
13 | 5

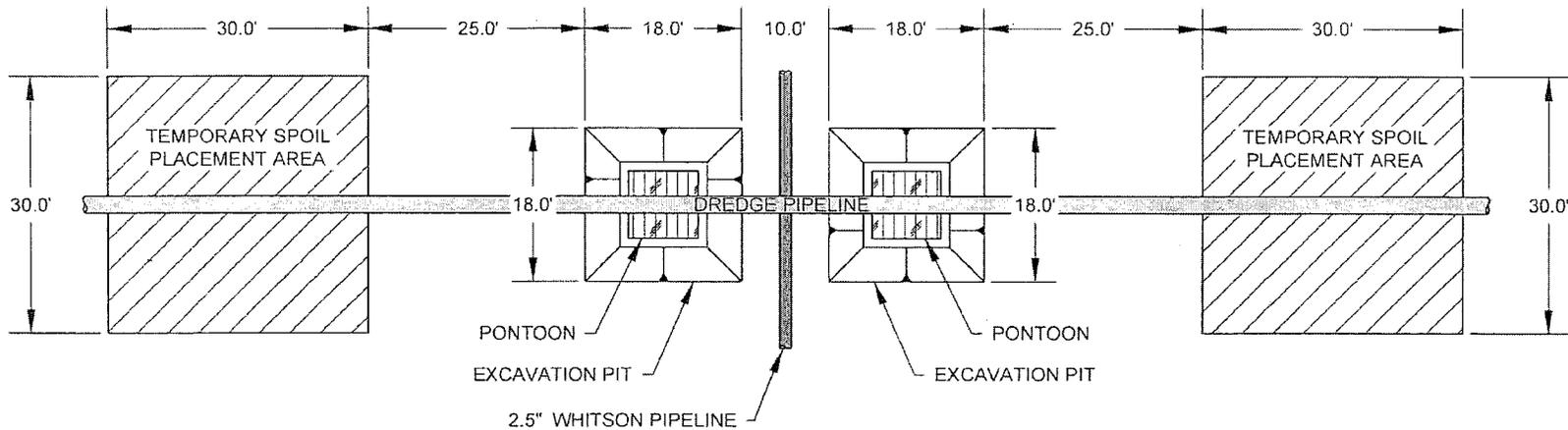
PROFILE VIEW



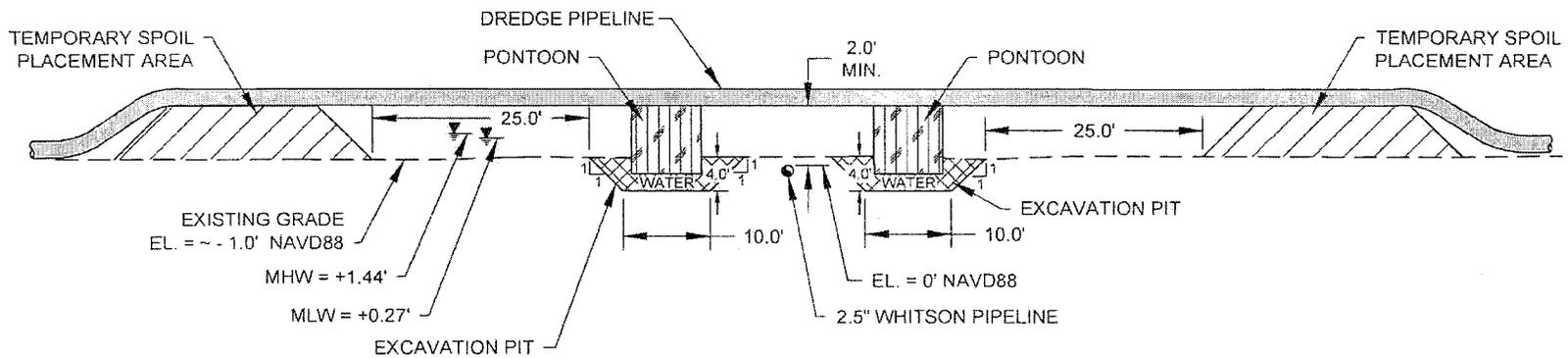
PLAN VIEW
N.T.S

- NOTES:
1. THE DREDGE PIPELINE SHALL REMAIN ELEVATED ABOVE THE EXISTING REVETTED EMBANKMENT.
 2. A SUFFICIENT QUANTITY OF ARTICULATED CONCRETE MATS SHALL BE PLACED ACROSS THE ENTIRE CROSSING WIDTH TO ENABLE ACCESS FOR EQUIPMENT.

APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70598	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGICAL RESTORATION PROJECT	BAYOU DECADE REVETTED EMBANKMENT CROSSING
DRAWN BY SHANE FAUST	DESIGNED BY S. HAYNES, P.E.	APPROVED BY RUSS JOFFRION, P.E.	STATE PROJECT NUMBER: TE-72 FEDERAL PROJECT NUMBER: TE-72
			DATE: OCTOBER 2015 SHEET 13 OF 28



PLAN VIEW



SECTION VIEW

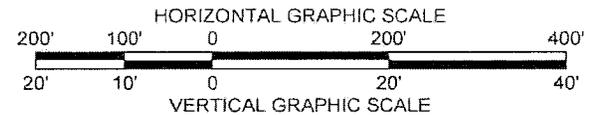
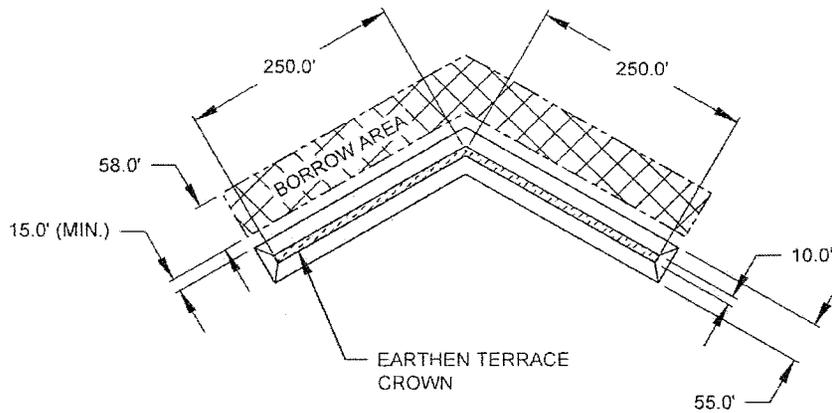
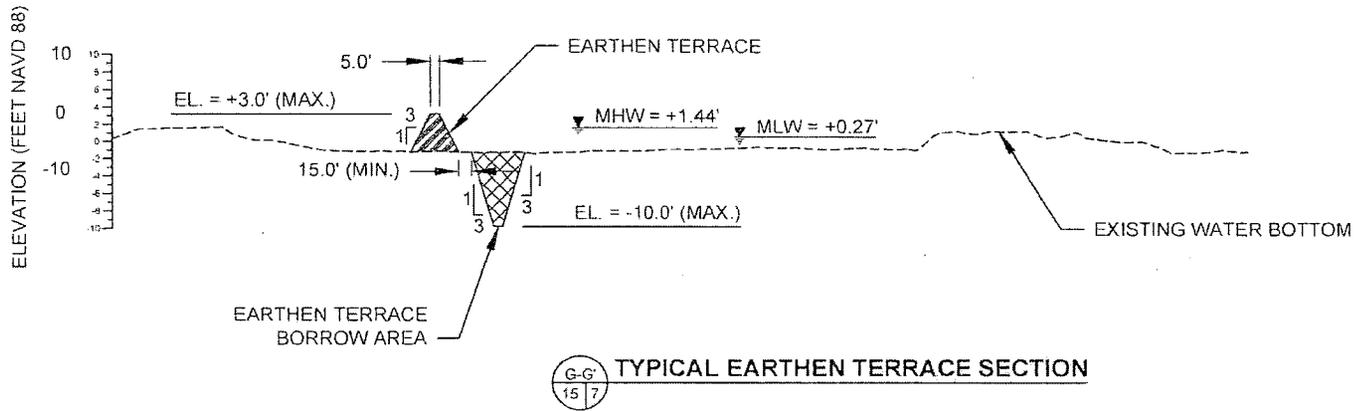


PIPELINE CROSSING DETAIL
NOT TO SCALE

NOTES:

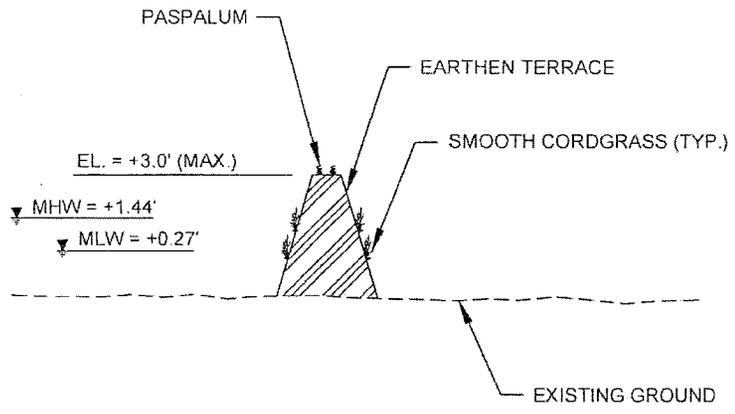
1. SPOIL TO BE BACKFILLED.
2. PONTOONS AND PIPELINE TO BE ANCHORED.

APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70506	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION PROJECT	PIPELINE CROSSING DETAIL
DRAWN BY: K CANTU	DESIGNED BY: S HAYNES, P.E.	APPROVED BY: R. JOFFRION, P.E.	STATE PROJECT NUMBER: TE-72 FEDERAL PROJECT NUMBER: TE-72
DATE: OCTOBER 2015		SHEET 14 OF 28	

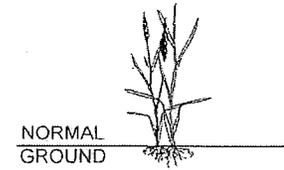


NOTE:
EXACT LOCATION OF THE EARTHEN TERRACES SHALL BE DETERMINED ON SITE AND WILL NOT DISTURB ANY EXISTING MARSH.

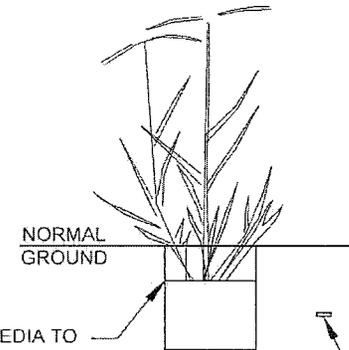
APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD, SUITE 400 LAFAYETTE, LA. 70598	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGICAL RESTORATION PROJECT	TYPICAL EARTHEN TERRACE SECTION
DRAWN BY: SHANE FAUST	DESIGNED BY: S. HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.	DATE: OCTOBER 2015
FEDERAL PROJECT NUMBER: TE-72			SHEET 15 OF 28



TYPICAL TERRACE PLANTING SECTION
(NTS)



**TYPICAL PLANTING
SMOOTH CORDGRASS
PLUG**



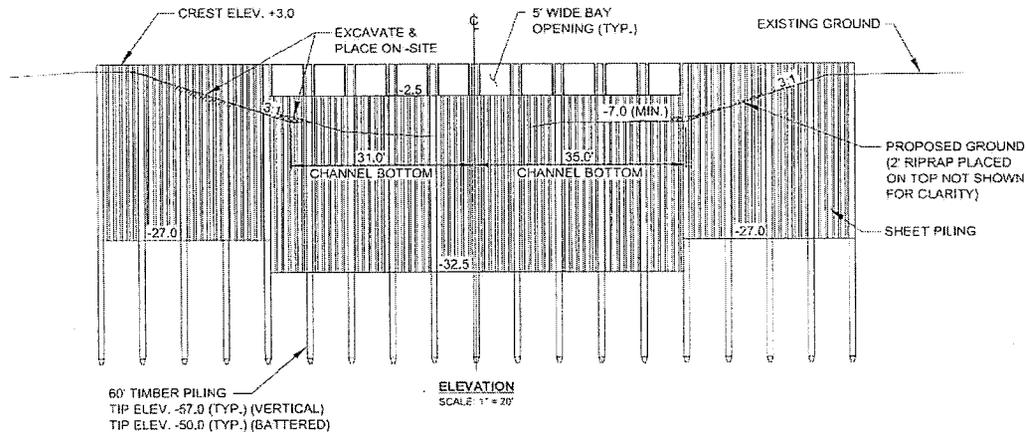
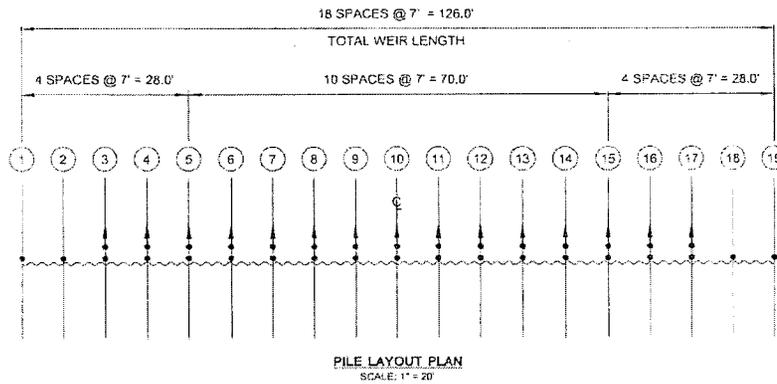
NOTES:

1. EXACT LOCATION OF THE PLANTS SHALL BE DETERMINED ON SITE BY CPRA DURING PRE-CONSTRUCTION LAYOUT.
2. NO EQUIPMENT MAY ALTER THE EXISTING CONDITIONS OF THE NEWLY CREATED TERRACE OR DISTURB EXISTING VEGETATION.
3. THE SMOOTH CORDGRASS SHALL BE PLANTED ON THREE FOOT CENTERS IN ROWS.
4. THE PASPALUM SHALL BE PLANTED ON FIVE FOOT CENTERS IN ROWS.

APPLICATION BY: UNITED STATES FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD SUITE 400 LAFAYETTE, LA 70508	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	LOST LAKE MARSH CREATION AND HYDROLOGICAL RESTORATION PROJECT	PLANTING LAYOUT AND DETAIL
DRAWN BY: SHANE FAUST		DESIGNED BY: S. HAYNES, P. E.	APPROVED BY: RUSS JOFFRION, P. E.
FEDERAL PROJECT NUMBER: TE-72			DATE: OCTOBER 2015 SHEET 16 OF 28

SITE NOTES

- DATUM: ALL ELEVATIONS ARE NAVD 88 IN US FEET
MHW = +1.44 FT.
MLW = +0.27 FT.
- FOR STRUCTURAL DETAILS AND NOTES OF TIMBER PILING, SHEET PILE WALL AND STEEL BAYS, SEE SHEET 27.
- CHANNEL EXCAVATION SHALL CONFORM TO TECHNICAL SPECIFICATION TS-905.
- RIPRAP SHALL BE 55 LB. CLASS AND CONFORM TO TECHNICAL SPECIFICATION TS-911.
- ONE (1) PERMANENT WARNING SIGN SHALL BE INSTALLED ON EACH SIDE OF THE STRUCTURE.

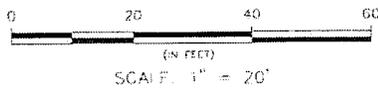


LEGEND:

- VERTICAL PILE
- ⬇ BATTERED PILE
- ▨ CHANNEL EXCAVATION
- ▨ IN-SITU FILL



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT.



REV	DATE	DESCRIPTION	BY

SIGMA
CONSULTING
GROUP, INC.
ENGINEERING CONSULTANTS
10305 Airline Highway
Baton Rouge, Louisiana 70816

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: AMEDEL

DESIGNED BY: SUPEDA

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION

STATE PROJECT NUMBER: TE-72

FEDERAL PROJECT NUMBER: TE-72

APPROVED BY: LEAR

SITE WC-1 STRUCTURE DETAIL

DATE: APRIL 2013

SHEET 18 OF 25

NO ATTEMPT HAS BEEN MADE BY SIGMA CONSULTING GROUP, INC. TO VERIFY TITLE, ACTUAL LEGAL OWNERSHIPS, SERVITUDES, EASEMENTS, RIGHTS-OF-WAY, OR OTHER BURDENS ON THE PROPERTY.

EXISTING TOPOGRAPHIC SURVEY PERFORMED BY PYBURN & ODOM MCA DATED MAY 2011

DATUM: ALL ELEVATIONS ARE IN NAVD 88 IN US SURVEY FEET. ALL HORIZONTAL COORDINATES ARE IN NAD 83 (LOUISIANA STATE PLANE, SOUTH ZONE) IN US SURVEY FEET. SEE GENERAL NOTES ON SHEET 2 FOR SURVEY CONTROL DATA.

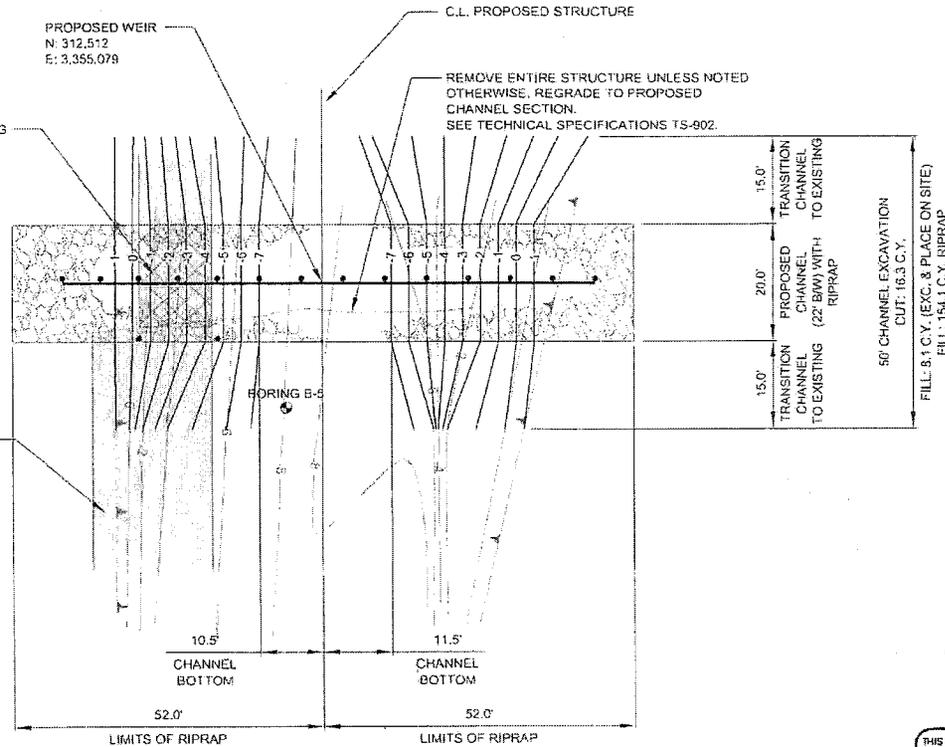
ALL REQUIRED CHANNEL EXCAVATION IS TO BE PLACED ON SITE. REFER TO THE ELEVATION VIEW ON THE FOLLOWING SHEET FOR ADDITIONAL INFORMATION.



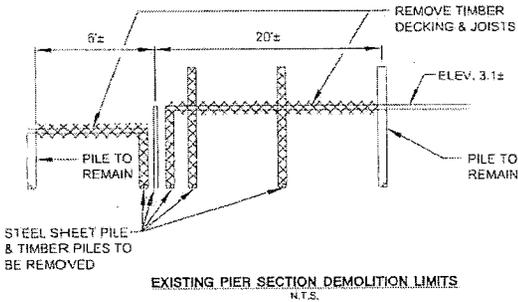
NON-VEGETATED WATER BOTTOM		
0.08 AC.	16.3 C.Y.	EXCAVATION
0.08 AC.	0.1 C.Y.	IN-SITU FILL
0.05 AC.	154.1 C.Y.	ROCK/RIPRAP

LEGEND:

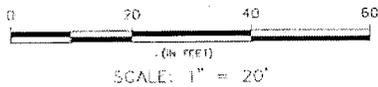
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TOP OF BANK
- PROPOSED WEIR
- PROPOSED RIPRAP 2' THICK (MIN.)
- EXISTING WEIR TO BE REMOVED



11/21/2012 4:21 PM
 C:\Users\jgarcia\Documents\Projects\2012\11-21-12\11-21-12\11-21-12.dwg



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONTRACTANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



REV.	DATE	DESCRIPTION	BY

SIGMA CONSULTING GROUP, INC.
 ENGINEERING CONSULTANTS
 10305 Airline Highway
 Baton Rouge, Louisiana 70816

COASTAL PROTECTION AND RESTORATION AUTHORITY
 450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

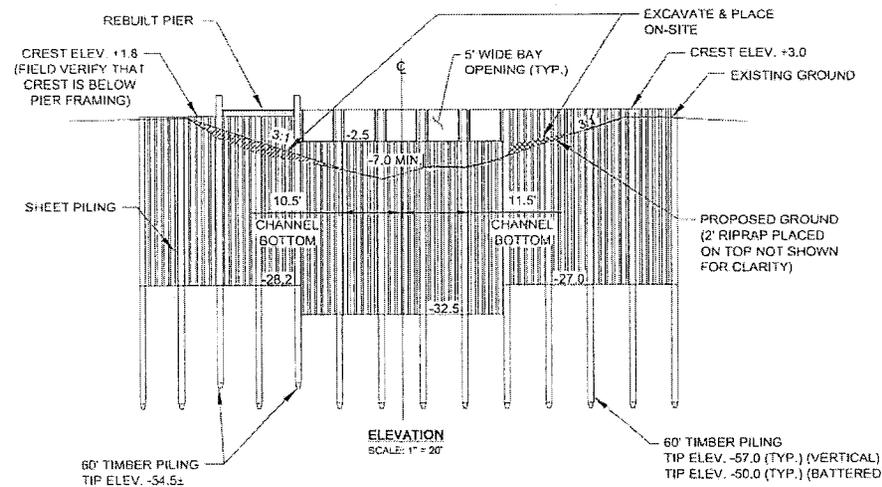
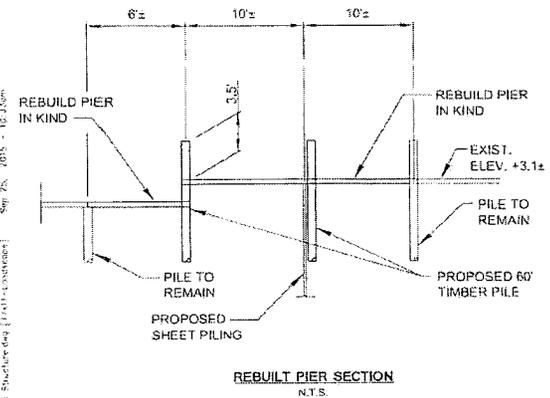
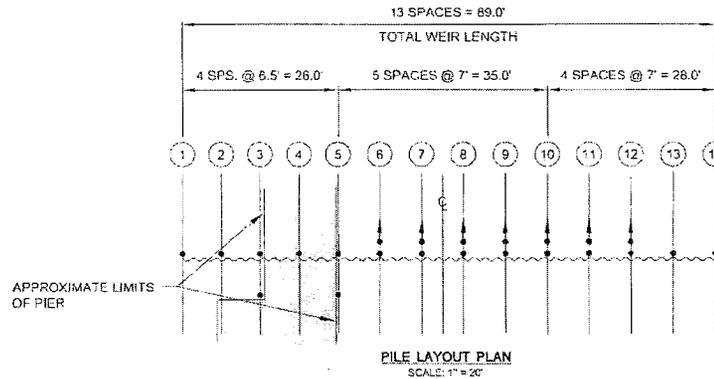
LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION
 STATE PROJECT NUMBER: TE-72
 FEDERAL PROJECT NUMBER: TE-72
 APPROVED BY: LFAR

SITE WC-1 PLAN VIEW
 DATE: APRIL 2015
 SHEET 19 OF 28

DRAWN BY: AMEDEL DESIGNED BY: SEPEDA

SITE NOTES

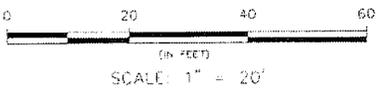
- DATUM: ALL ELEVATIONS ARE NAVD 88 IN US FEET
MHW = +1.44 FT.
MLW = +0.27 FT.
- FOR STRUCTURAL DETAILS AND NOTES OF TIMBER PILING, SHEET PILE WALL AND STEEL BAYS, SEE SHEET 27.
- CHANNEL EXCAVATION SHALL CONFORM TO TECHNICAL SPECIFICATION TS-905
- RIPRAP SHALL BE 55 LB. CLASS AND CONFORM TO TECHNICAL SPECIFICATION TS-911.
- ONE (1) PERMANENT WARNING SIGN SHALL BE INSTALLED ON EACH SIDE OF THE STRUCTURE.



- LEGEND:**
- VERTICAL PILE
 - ↓ BATTERED PILE
 - ▨ CHANNEL EXCAVATION
 - ▨ IN-SITU FILL

PRELIMINARY
 SEE TITLE BLOCK
 P.E. 20665
 GREGORY D. APPENDER

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



		 SIGMA CONSULTING GROUP, INC. ENGINEERING CONSULTANTS 10306 Airline Highway Baton Rouge, Louisiana 70816	COASTAL PROTECTION AND RESTORATION AUTHORITY 250 LAUREL STREET HATON ROUGE, LOUISIANA 70001	LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION STATE PROJECT NUMBER: TF-72 FEDERAL PROJECT NUMBER: TF-72	SITE W/C-1 STRUCTURE DETAIL DATE: APRIL 2015 SHEET 20 OF 25	
REV	DATE	DESCRIPTION	BY	DRAWN BY: AMEDP	DESIGNED BY: SEPHDA	APPROVED BY: LEAR

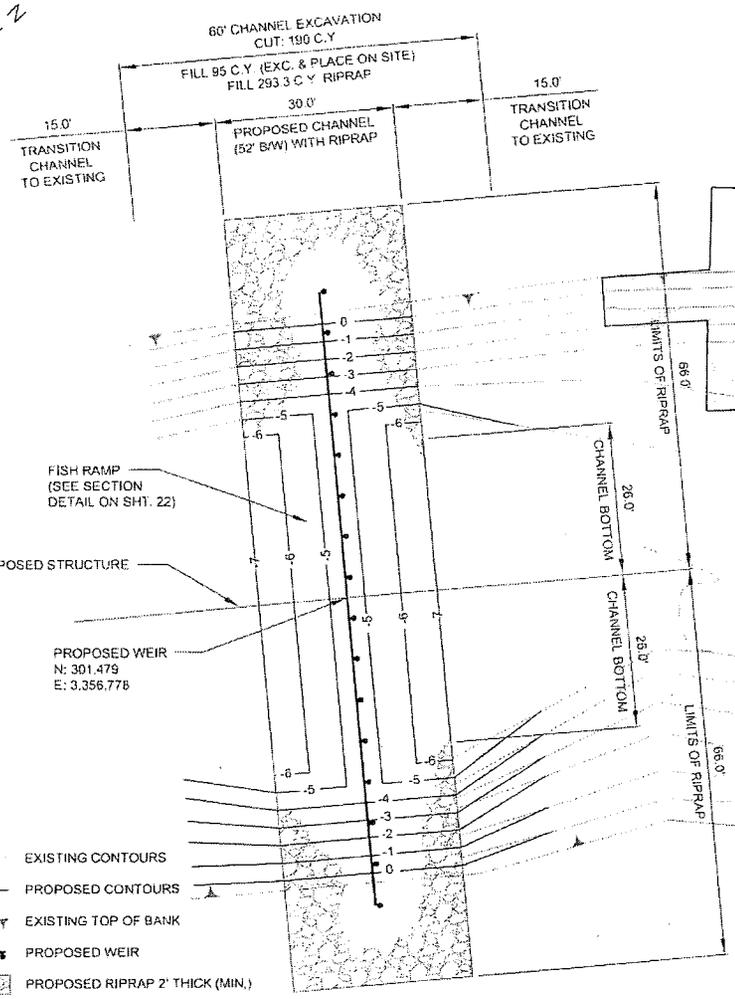
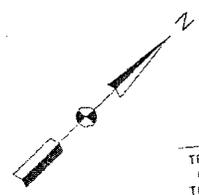
NO ATTEMPT HAS BEEN MADE BY SIGMA CONSULTING GROUP, INC. TO VERIFY TITLE, ACTUAL LEGAL OWNERSHIPS, SERVITUDES, EASEMENTS, RIGHTS-OF-WAY, OR OTHER BURDENS ON THE PROPERTY.

NON-VEGETATED WATER BOTTOM		
0.18 AC.	190.0 C.Y.	EXCAVATION
0.18 AC.	95.0 C.Y.	IN-SITU FILL
0.09 AC.	293.3 C.Y.	ROCK/RIPRAP

EXISTING TOPOGRAPHIC SURVEY PERFORMED BY PYBURN & ODOM MCA DATED MAY 2011

DATUM: ALL ELEVATIONS ARE IN NAVD 88 IN US SURVEY FEET. ALL HORIZONTAL COORDINATES ARE IN NAD 83 (LOUISIANA STATE PLANE, SOUTH ZONE) IN US SURVEY FEET. SEE GENERAL NOTES ON SHEET 2 FOR SURVEY CONTROL DATA.

ALL REQUIRED CHANNEL EXCAVATION IS TO BE PLACED ON SITE. REFER TO THE ELEVATION VIEW ON THE FOLLOWING SHEET FOR ADDITIONAL INFORMATION.



LIMITS OF RIPRAP

LIMITS OF RIPRAP

CHANNEL BOTTOM

CHANNEL BOTTOM

- LEGEND:**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING TOP OF BANK
 - PROPOSED WEIR
 - PROPOSED RIPRAP 2' THICK (MIN.)
 - EXISTING WEIR TO BE REMOVED



REV	DATE	DESCRIPTION	BY

SIGMA CONSULTING GROUP, INC.
 ENGINEERING CONSULTANTS
 10305 Airline Highway
 Baton Rouge, Louisiana 70816

COASTAL PROTECTION AND RESTORATION AUTHORITY
 450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION
 STATE PROJECT NUMBER: TE-72
 FEDERAL PROJECT NUMBER: TE-12
 APPROVED BY: LEAR



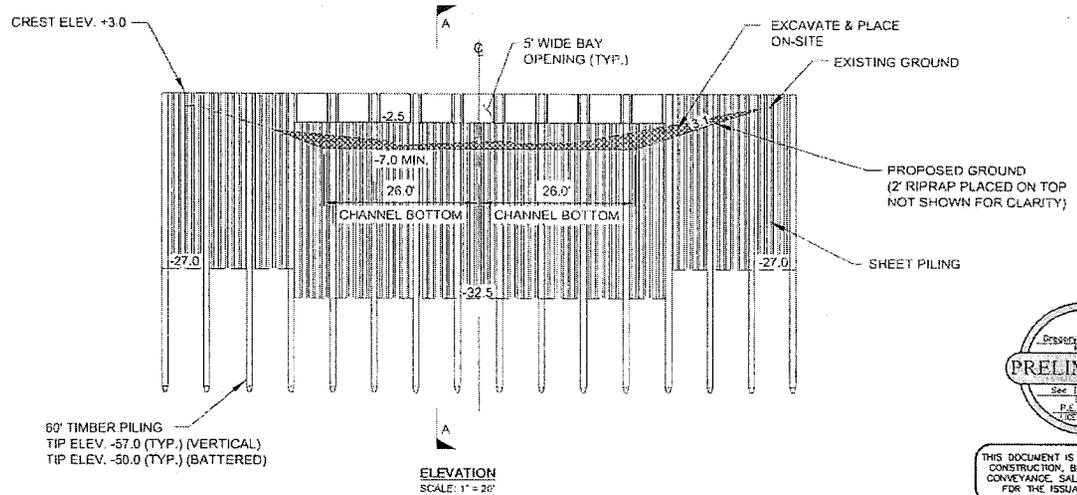
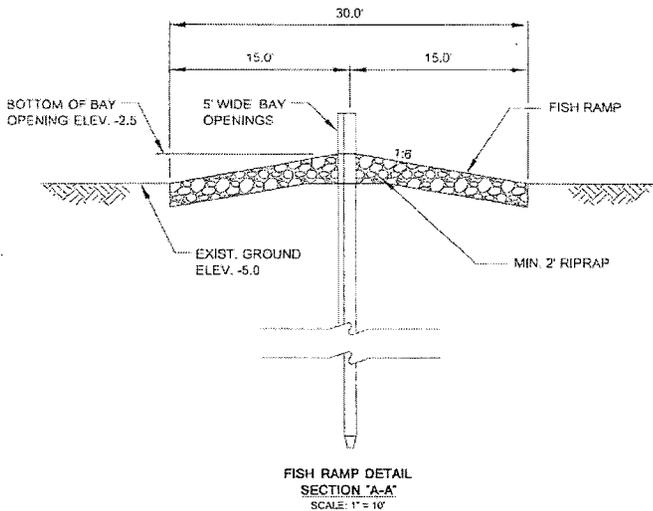
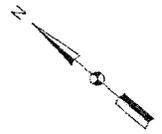
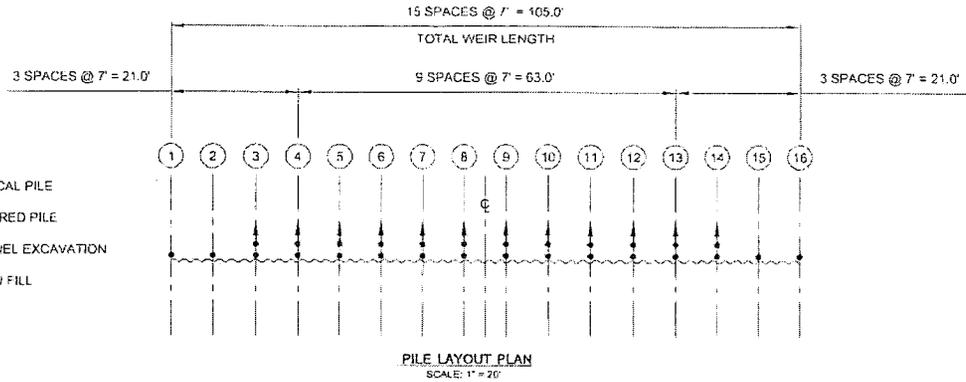
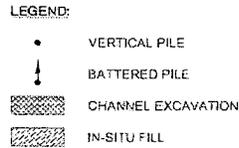
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

SITE WC-5
 PLAN SHEET
 DATE: APRIL 2013
 SHEET 27 OF 28

C:\WORK\2013\05200\Plan Sheets\WC-5 Site Plan.dwg (11'x17' plot) - 4/22/13

SITE NOTES

- DATUM: ALL ELEVATIONS ARE NAVD 88 IN US FEET
 MHW = +1.44 FT.
 MLW = +0.27 FT.
- FOR STRUCTURAL DETAILS AND NOTES OF TIMBER PILING, SHEET PILE WALL AND STEEL BAYS, SEE SHEET 27
- CHANNEL EXCAVATION SHALL CONFORM TO TECHNICAL SPECIFICATION TS-905.
- RIPRAP SHALL BE 55 LB. CLASS AND CONFORM TO TECHNICAL SPECIFICATION TS-911.
- ONE (1) PERMANENT WARNING SIGN SHALL BE INSTALLED ON EACH SIDE OF THE STRUCTURE.



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



REV.	DATE	DESCRIPTION	BY



COASTAL PROTECTION AND RESTORATION AUTHORITY
 430 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION

SITE WC-5 STRUCTURE DETAIL

STATE PROJECT NUMBER: TE-72

FEDERAL PROJECT NUMBER: TE-72

APPROVED BY: LEAR

DATE: APRIL 2015

SHEET 22 OF 28

DRAWN BY: AMEDEL

DESIGNED BY: SLPEDA

NO ATTEMPT HAS BEEN MADE BY SIGMA CONSULTING GROUP, INC. TO VERIFY TITLE, ACTUAL LEGAL OWNERSHIPS, SERVITUDES, EASEMENTS, RIGHTS-OF-WAY, OR OTHER BURDENS ON THE PROPERTY.

EXISTING TOPOGRAPHIC SURVEY PERFORMED BY PYBURN & ODOM MCA DATED MAY 2011

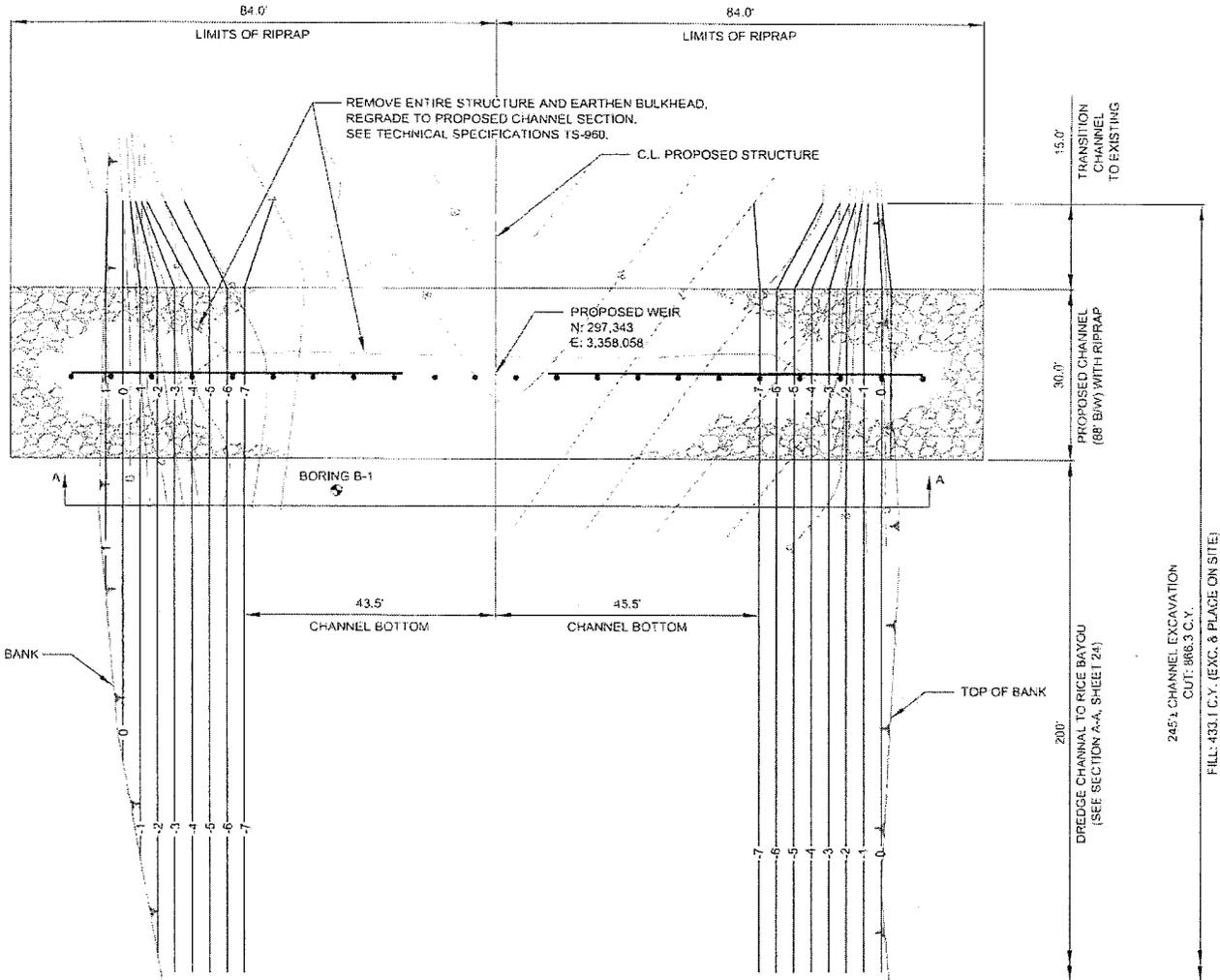
DATUM: ALL ELEVATIONS ARE IN NAVD 88 IN US SURVEY FEET. ALL HORIZONTAL COORDINATES ARE IN NAD 83 (LOUISIANA STATE PLANE, SOUTH ZONE) IN US SURVEY FEET. SEE GENERAL NOTES ON SHEET 2 FOR SURVEY CONTROL DATA.

ALL REQUIRED CHANNEL EXCAVATION IS TO BE PLACED ON SITE. REFER TO THE ELEVATION VIEW ON THE FOLLOWING SHEET FOR ADDITIONAL INFORMATION.

NON-VEGETATED WATER BOTTOM		
0.75 AC.	866.3 C.Y.	EXCAVATION
0.75 AC.	433.1 C.Y.	IN-SITU FILL
0.12 AC.	373.3 C.Y.	ROCK/RIPRAP

LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TOP OF BANK
- PROPOSED WEIR
- PROPOSED RIPRAP 2' THICK (MIN.)
- EXISTING WEIR TO BE REMOVED



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



REV	DATE	DESCRIPTION	BY

SIGMA CONSULTING GROUP, INC.
ENGINEERING CONSULTANTS
13305 Airline Highway
Baton Rouge, Louisiana 70816

COASTAL PROTECTION AND RESTORATION AUTHORITY

350 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: AMJEDDE

DESIGNED BY: SHPEDA

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION

STATE PROJECT NUMBER: TE-72

FEDERAL PROJECT NUMBER: TE-71

APPROVED BY: LEAR

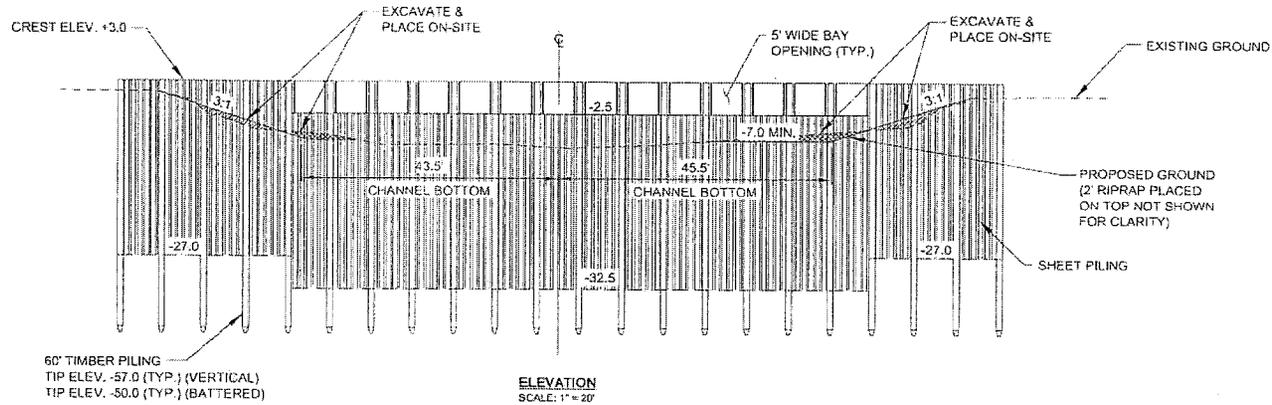
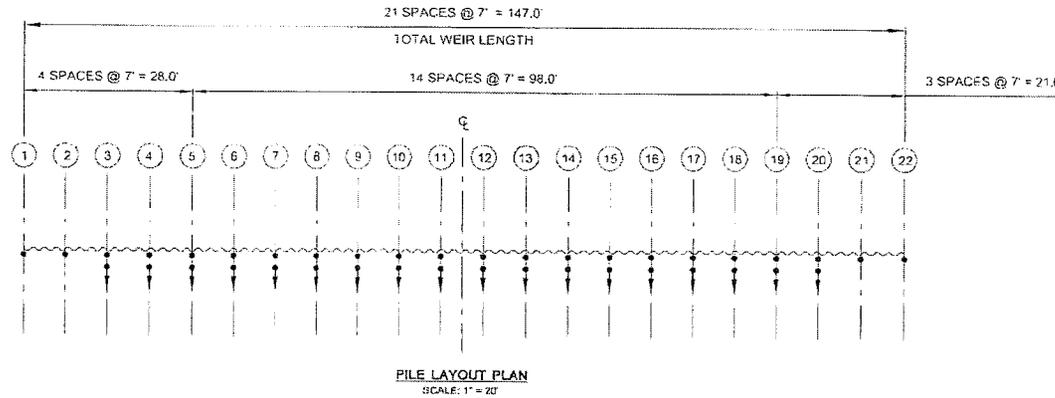
SITE WC-6 PLAN SHEET

DATE: APRIL 2015

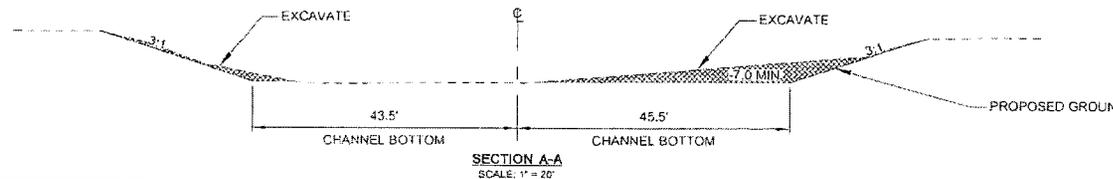
SHEET 23 OF 32

SITE NOTES

- DATUM: ALL ELEVATIONS ARE NAVD 88 IN US FEET
 MLW = +1.44 FT.
 MLW = +0.27 FT.
- FOR STRUCTURAL DETAILS AND NOTES OF TIMBER PILING, SHEET PILE WALL AND STEEL BAYS, SEE SHEET 27
- CHANNEL EXCAVATION SHALL CONFORM TO TECHNICAL SPECIFICATION TS-400.
- RIPRAP SHALL BE 55 LB. CLASS AND CONFORM TO TECHNICAL SPECIFICATION TS-720.
- ONE (1) PERMANENT WARNING SIGN SHALL BE INSTALLED ON EACH SIDE OF THE STRUCTURE.



- LEGEND:**
- VERTICAL PILE
 - ⤵ BATTERED PILE
 - [Hatched Box] CHANNEL EXCAVATION
 - [Dotted Box] IN-SITU FILL



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

<p>SIGMA CONSULTING GROUP, INC. ENGINEERING CONSULTANTS 10305 Airline Highway Baton Rouge, Louisiana 70816</p>			<p>COASTAL PROTECTION AND RESTORATION AUTHORITY 150 LAUREL STREET BATON ROUGE, LOUISIANA 70801</p>		<p>LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION</p>		<p>SITE WC-6 STRUCTURE DETAIL</p>																	
<table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			REV.	DATE	DESCRIPTION	BY													<p>DRAWN BY: ANJIEBE</p>		<p>DESIGNED BY: SEPEDA</p>		<p>STATE PROJECT NUMBER: FF-72</p>	
REV.	DATE	DESCRIPTION	BY																					
<p>APPROVED BY: LEAR</p>			<p>FEDERAL PROJECT NUMBER: FF-72</p>		<p>DATE: APRIL 2015</p>		<p>SHEET 24 OF 28</p>																	



NO ATTEMPT HAS BEEN MADE BY SIGMA CONSULTING GROUP, INC. TO VERIFY TITLE, ACTUAL LEGAL OWNERSHIPS, SERVITUDES, EASEMENTS, RIGHTS-OF-WAY, OR OTHER BURDENS ON THE PROPERTY.

EXISTING TOPOGRAPHIC SURVEY PERFORMED BY SIGMA CONSULTING GROUP, INC. ON AUGUST 21, 2012

DATUM: ALL ELEVATIONS ARE IN NAVD 88 IN US SURVEY FEET. ALL HORIZONTAL COORDINATES ARE IN NAD 83 (LOUISIANA STATE PLANE, SOUTH ZONE) IN US SURVEY FEET. SEE GENERAL NOTES ON SHEET 2 FOR SURVEY CONTROL DATA.

SOIL BORING B-20 MAY BE REFERENCED FOR THIS LOCATION.

ALL REQUIRED CHANNEL EXCAVATION IS TO BE PLACED ON SITE IN AREAS DESIGNATED. REFER TO THE ELEVATION VIEW ON THE FOLLOWING SHEET FOR ADDITIONAL INFORMATION.

NON-VEGETATED WATER BOTTOM		
0.39 AC.	1,190.0 C.Y.	EXCAVATION
0.28 AC.	595.0 C.Y.	IN-SITU FILL
0.08 AC.	244.4 C.Y.	ROCK/RIPRAP

LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TOP OF BANK
- PROPOSED WEIR
- PROPOSED RIPRAP 2" THICK (MIN.)
- CHANNEL EXCAVATION
- FILL AREA



REV.	DATE	DESCRIPTION	BY

SIGMA
CONSULTING
GROUP, INC.
ENGINEERING CONSULTANTS
18305 Airline Highway
Baton Rouge, Louisiana 70816

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: AME/DF

DESIGNED BY: SLP/DA

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION

STATE PROJECT NUMBER: TE-72

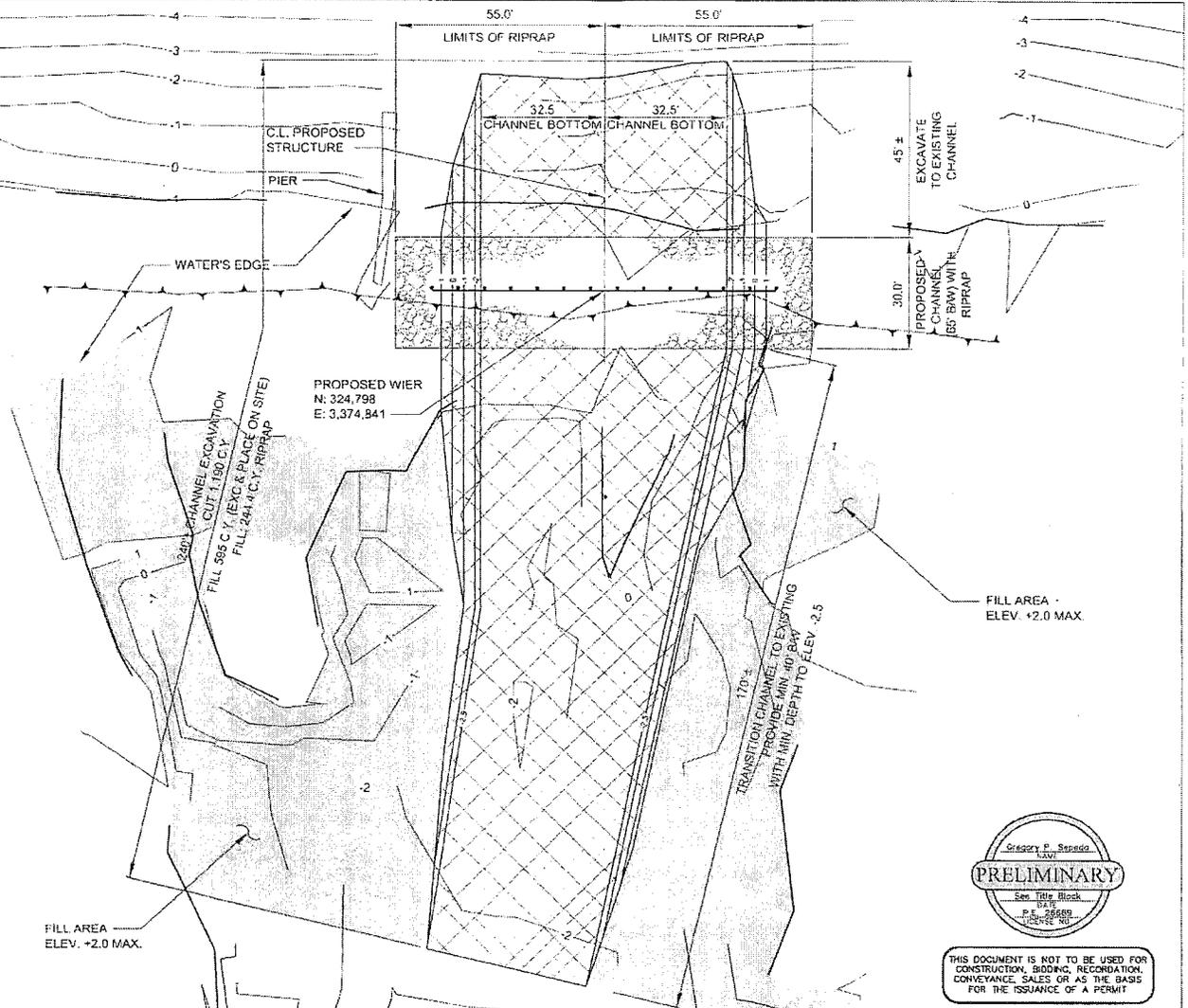
FEDERAL PROJECT NUMBER: TE-72

APPROVED BY: LEAR

SITE-1
PLAN VIEW

DATE: APRIL 2015

SHEET 25 OF 28



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

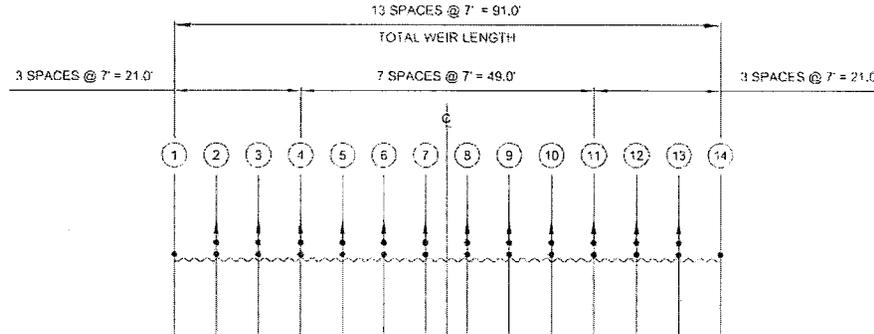
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SITE NOTES

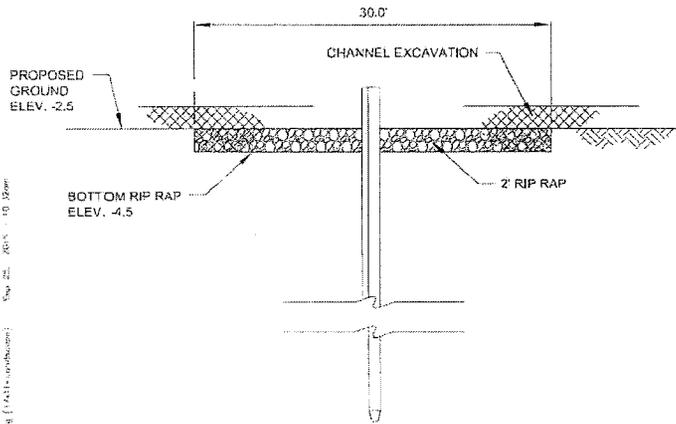
- DATUM: ALL ELEVATIONS ARE NAVD 88 IN US FEET
MHW = +1.44 FT.
MLW = +0.27 FT.
- FOR STRUCTURAL DETAILS AND NOTES OF TIMBER PILING, SHEET PILE WALL AND STEEL BAYS, SEE SHEET 27.
- CHANNEL EXCAVATION SHALL CONFORM TO TECHNICAL SPECIFICATION TS-805.
- RIPRAP SHALL BE 55 LB. CLASS AND CONFORM TO TECHNICAL SPECIFICATION TS-911.
- ONE (1) PERMANENT WARNING SIGN SHALL BE INSTALLED ON EACH SIDE OF THE STRUCTURE

LEGEND:

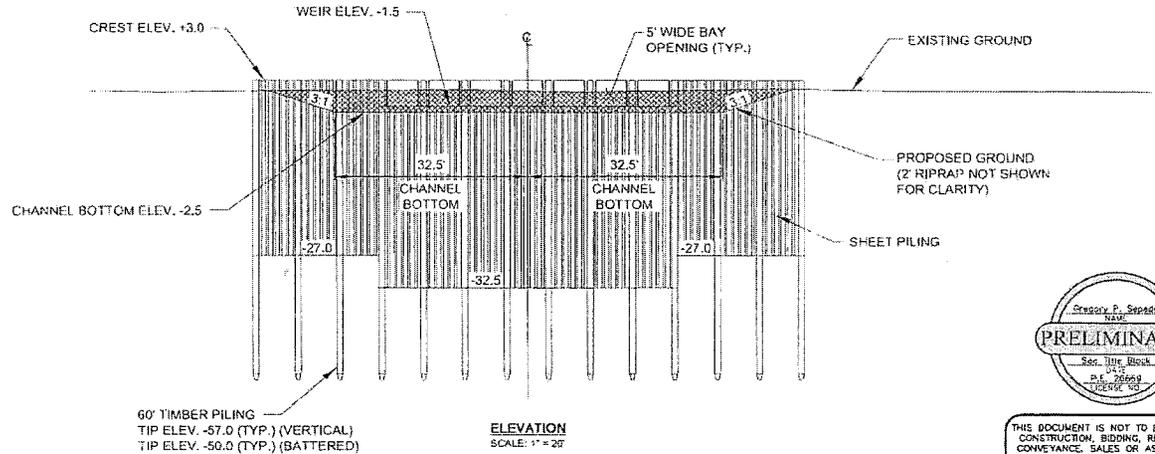
- VERTICAL PILE
- ▲ BATTERED PILE
- ▨ CHANNEL EXCAVATION
- ▩ IN-SITU FILL



PILE LAYOUT PLAN
SCALE: 1" = 20'



SECTION
SCALE: 1" = 10'



ELEVATION
SCALE: 1" = 20'



THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



REV.	DATE	DESCRIPTION	BY

SIGMA
CONSULTING
GROUP, INC.
ENGINEERING CONSULTANTS
10205 Airline Highway
Baton Rouge, Louisiana 70810

COASTAL PROTECTION AND RESTORATION AUTHORITY
150 LAUREL STREET
HAITON ROUGE, LOUISIANA 70001

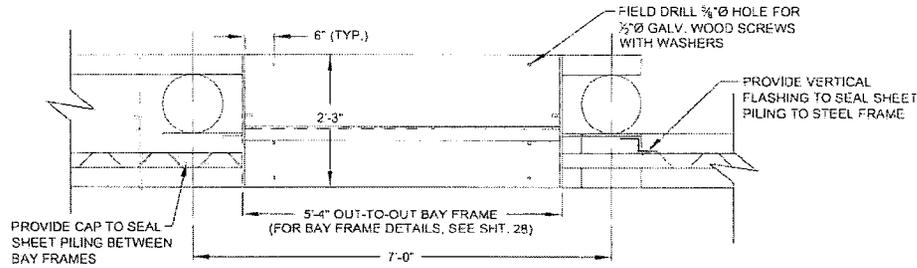
LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION
STATE PROJECT NUMBER: TC-72
FEDERAL PROJECT NUMBER: TR-72

SITE -1
STRUCTURE DETAIL
DATE: APRIL 2015
SHEET 26 OF 26

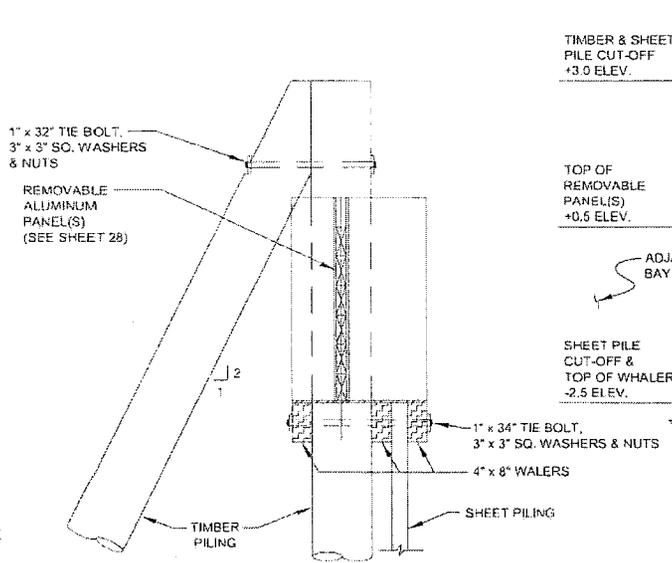
DRAWN BY: AMEDIE DESIGNED BY: SEPEDA APPROVED BY: CLEAR

STRUCTURE NOTES:

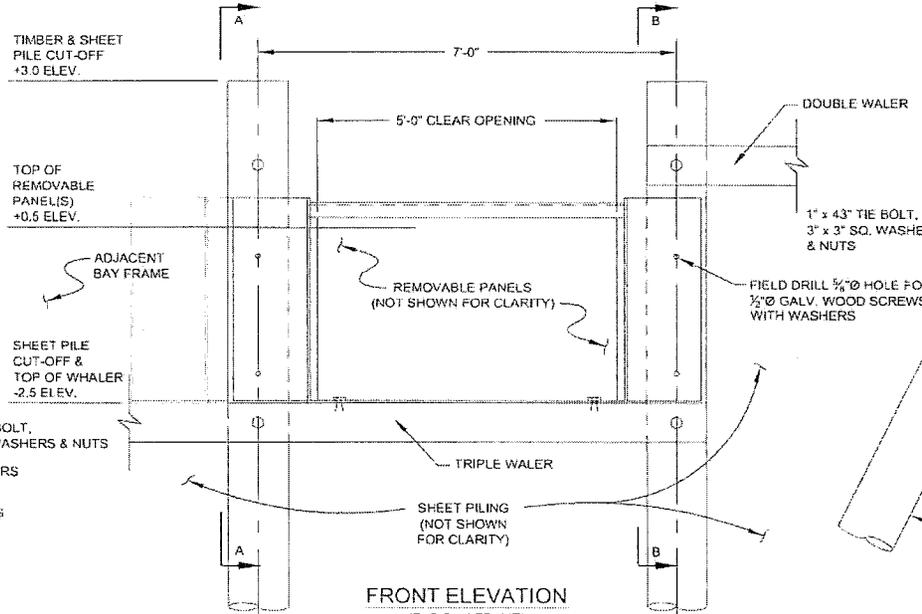
1. TIMBER PILES SHALL CONFORM TO TECHNICAL SPECIFICATION TS-906. PILES SHALL BE TREATED WITH A CREOSOTE SOLUTION CONFORMING TO AWPA P2 TO A MINIMUM RETENTION OF 20 PCF AND CAPPED.
2. TIMBER PILING SHALL BE 60" IN LENGTH WITH A NORMAL 13" DIAMETER BUTT AND 7" MINIMUM DIAMETER AT THE TIP.
3. THE TOP OF THE PILES SHALL BE COATED WITH CREOSOTE OIL PRIOR TO PLACING CAP. THE PILE CAP SHALL BE ATTACHED USING ALUMINUM OR STAINLESS STEEL NAILS.
4. THE WALERS SHALL BE TREATED STRUCTURAL TIMBER AND CONFORM TO TECHNICAL SPECIFICATION TS-808.
5. THE STEEL SHEET PILING SHALL CONFORM TO TECHNICAL SPECIFICATION TS-907.
6. WHEN FIELD DRILLING HOLES IN STEEL PLATES FOR THE WOOD SCREWS, CARE SHOULD BE TAKEN NOT TO PENETRATE THE TIMBER MEMBER MORE THAN 1/2".



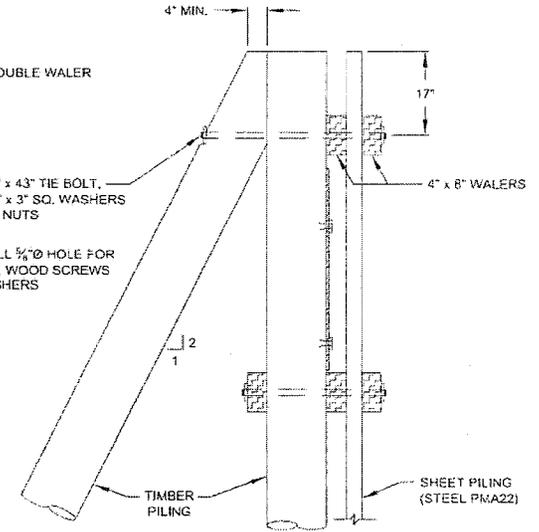
TOP VIEW
(END BAY FRAME)
SCALE: 1/2" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"



FRONT ELEVATION
(END BAY FRAME)
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"



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REV	DATE	DESCRIPTION	BY

SIGMA
CONSULTING
GROUP, INC.
ENGINEERING CONSULTANTS
10305 Airline Highway
Baton Rouge, Louisiana 70810

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: YARBROUGH DESIGNED BY: SEPEDA

LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION

STATE PROJECT NUMBER: TE-72

FEDERAL PROJECT NUMBER: TE-97

APPROVED BY: BRASHELL

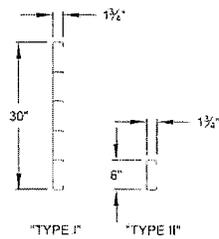
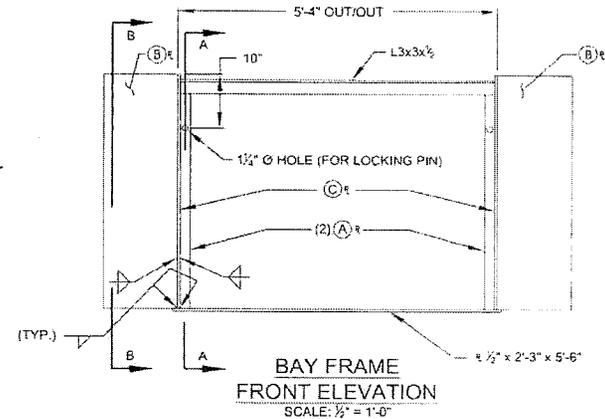
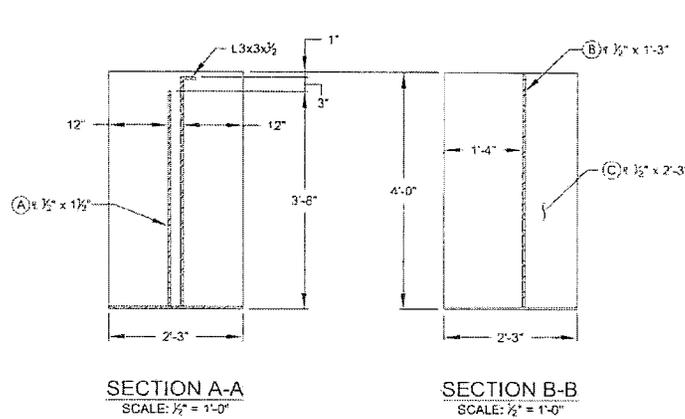
TYPICAL DETAILS

DATE: APRIL 2011

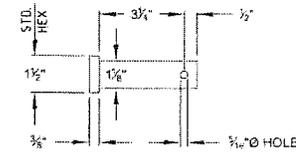
SHEET 21 OF 28

STEEL NOTES:

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO TECHNICAL SPECIFICATION TS-909.
2. ALL STRUCTURAL STEEL SHALL BE STRUCTURAL CARBON STEEL (GRADE 36). ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
3. ALUMINUM PLANKS SHALL CONFORM TO TECHNICAL SPECIFICATION TS-910.
4. CLEVIS PINS SHALL BE STAINLESS STEEL MATERIAL, AND ARE AT NO DIRECT PAY. PADLOCKS ARE TO BE PROVIDED BY CPRA.



ALUMINUM PLANKS
N.T.S.
(ONE TYPE I & TYPE II REQUIRED PER EACH BAY)



CLEVIS LOCKING PIN
N.T.S.
(2 PINS REQUIRED PER BAY)



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REV.	DATE	DESCRIPTION	BY

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COASTAL PROTECTION AND RESTORATION AUTHORITY
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LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION

TYPICAL DETAILS

STATE PROJECT NUMBER: 15-72

FEDERAL PROJECT NUMBER: 78-72

DATE: APRIL 2015

DRAWN BY: YARROUGH

DESIGNED BY: SEPPDA

APPROVED BY: BEASJELL

SHEET 28 OF 28